3.15 Special Designation Areas

SDAs are units of land managed by federal or state agencies for the protection and enhancement of specific resource values that are unique to that area and require more intensive management emphasis than is applied to surrounding public lands. SDAs may be Congressionally or agency-designated. Congressionally designated SDAs within the Project analysis area include national wildlife refuges, national monuments, wilderness areas, wilderness study areas, wild and scenic rivers, national conservation areas, national historic and scenic trails, and other similar management areas. Agency-designated SDAs include BLM areas of critical environmental concern and USFS inventoried roadless areas and unroaded/undeveloped areas. Recreation and wildlife management areas identified in this section as designated land use areas are described in more detail in Section 3.13, Recreation Resources. Military Operating Areas are described in Section 3.16, Transportation and Access.

3.15.1 Regulatory Background

Each type of SDA has its own related Federal and state laws, plans, and regulations, which are described within the associated subheading in Section 3.15.3.

3.15.2 Data Sources

Information regarding SDAs within the analysis area was obtained from a review of existing published sources and agency land use management plans. SDAs were identified using GIS data from the USFS, the BLM, and the states of Wyoming, Colorado, Utah, and Nevada. Current land use information was obtained from available GIS data, topographic maps, and internet-based tools including GoogleEarth™. A list of the land use plans used in the development of this section is presented in **Tables 1-3** and **1-4**.

3.15.3 Analysis Area

The analysis area for special designations comprises all SDAs within: 1) terminal areas; 2) alternative ground electrode areas; 3) the refined transmission corridor (representing the maximum area in which the preliminary engineered alignment and/or 250-foot-wide transmission line ROW would be located, and where most associated access roads would be located); and 4) an identified area extending beyond the refined transmission corridor, where some temporary construction facilities and temporary and permanent access roads may be located. This area generally extends about 1 mile on each side of the alignment, but it has been reduced in some areas to avoid SDAs or address other resource constraints.

For purposes of clarity, SDAs have been broken out into sets of four maps each; with each set containing a separate figure for each region. **Figures 3.15-1** through **3.15-4** depict national conservation areas, national monuments, national wildlife refuges, national recreation areas, research natural areas, and areas of critical environmental concern. **Figures 3.15-5** through **3.15-8** identify the wilderness, proposed wilderness, wilderness study areas, and wild and scenic rivers. NHTs, inventoried roadless areas, and unroaded/undeveloped areas are depicted on separate sets of maps and are included with the appropriate discussions in Section 3.15.3. SDAs that are near, but not within, the analysis area are depicted on the maps, but are shown in grey (i.e., a “special management area” per the map legend) and are unlabeled.

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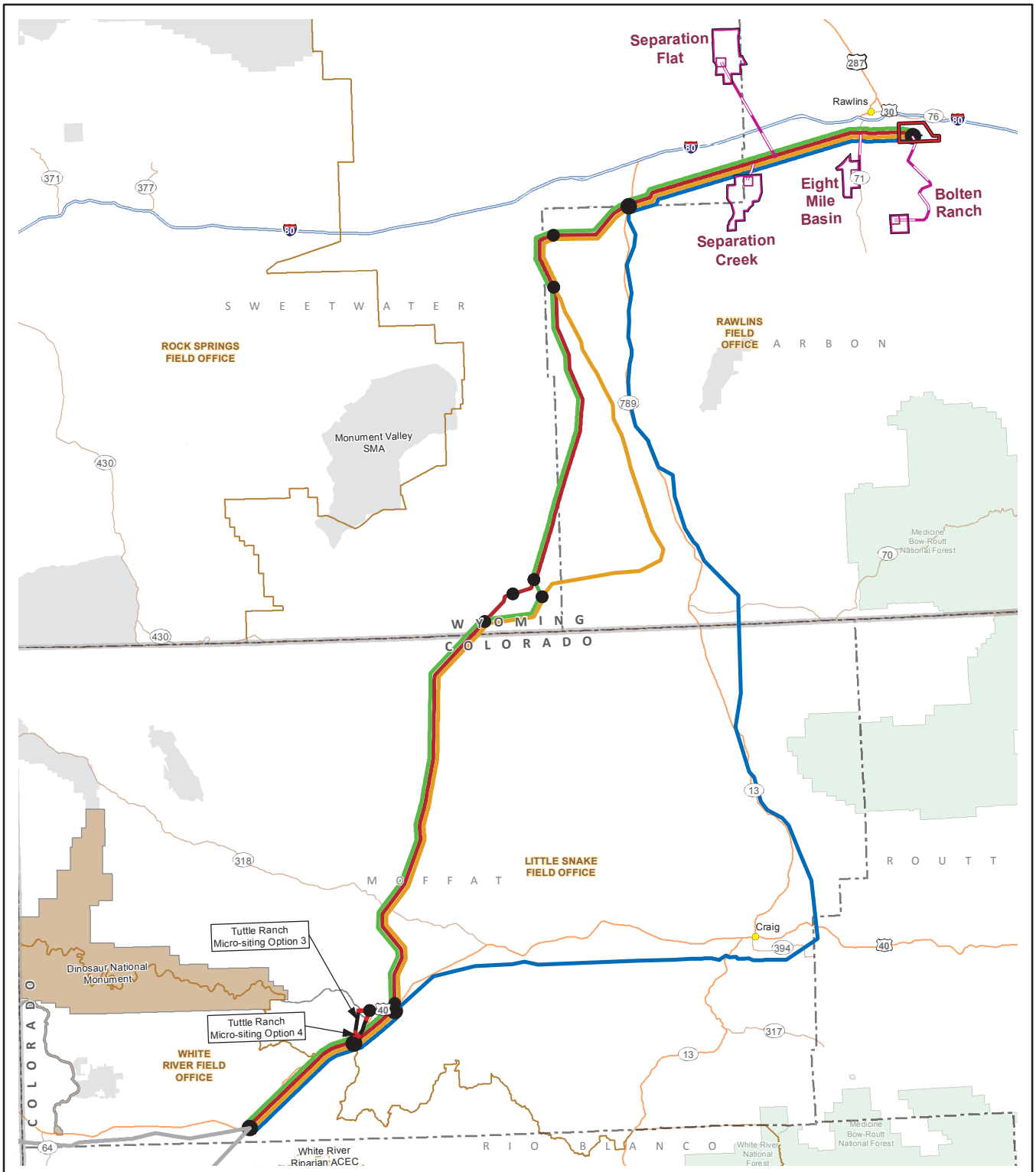

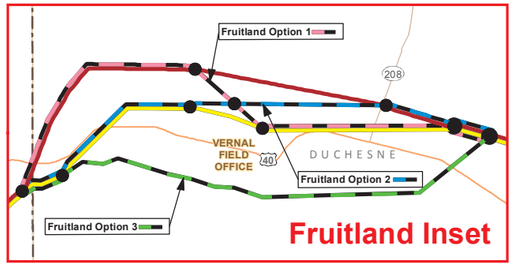

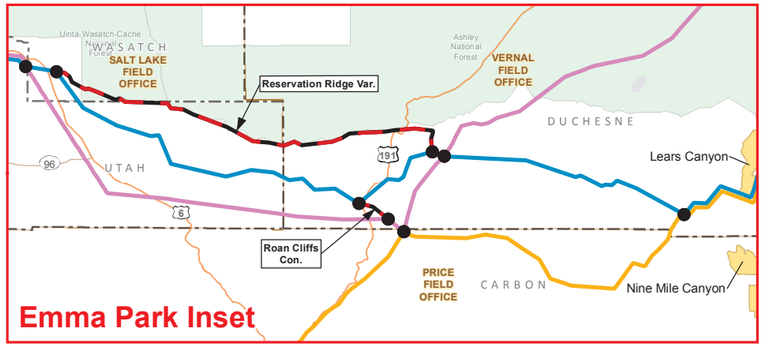

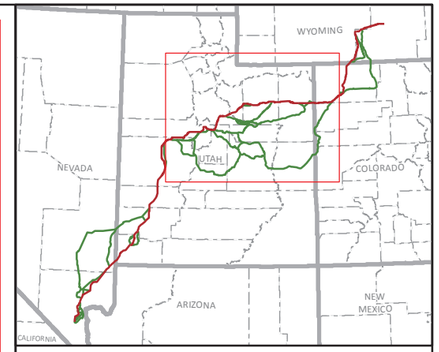

EIS Alternative Routes

- Applicant Proposed II-A
- Alternative II-B
- Alternative II-C
- Alternative II-D
- Alternative II-E
- Alternative II-F
- Agency Preferred II-G
- Alternative Variation (Var.) or Alternative Connector (Con.)
- Segment not in this Region
- Terminal Siting Area
- Potential Ground Electrode Siting Area
- Potential Ground Electrode Overhead Electrical Line

SDAs crossed by Project*

- ACEC
- NCA
- National Monument
- NRA
- NWR
- SDA not crossed by Project

*Not all SDA categories appear in each Region.

TRANSWEST EXPRESS TRANSMISSION PROJECT

Figure 3.15-2
Region II
Special Designation Areas
ACEC, NCA, National Monument, NRA, NWR, and SMA

0 10 20 40 Miles
0 10 20 40 Kilometers
N
1:1,200,000

Western AREA POWER ADMINISTRATION

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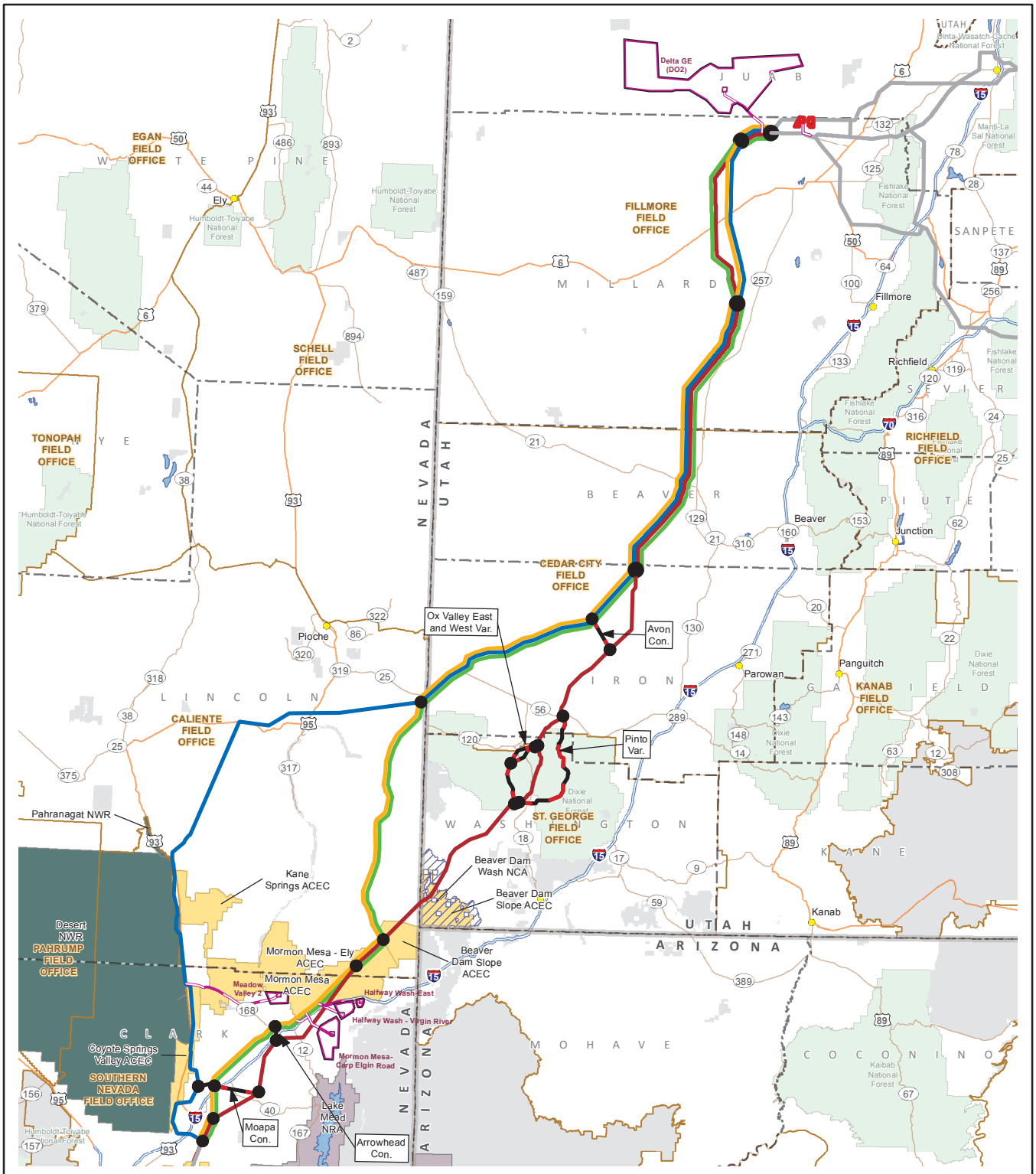
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Delta GE (DO2)
EGAN FIELD OFFICE
FILLMORE FIELD OFFICE
SCHELL FIELD OFFICE
TONOPAH FIELD OFFICE
CEDAR CITY FIELD OFFICE
RICHFIELD FIELD OFFICE
CALIENTE FIELD OFFICE
KANAB FIELD OFFICE
ST. GEORGE FIELD OFFICE
SOUTHERN NEVADA FIELD OFFICE
PAHRUMP FIELD OFFICE
Ely
Fillmore
Richfield
Beaver
Junction
Panguitch
Parowan
Pioche
Kanab
Ox Valley East and West Var.
Avon Con.
Pinto Var.
Moapa Con.
Arrowhead Con.
Pahranagat NWR
Desert NWR
Kane Springs ACEC
Beaver Dam Wash NCA
Beaver Dam Slope ACEC
Mormon Mesa - Ely ACEC
Mormon Mesa ACEC
Coyote Springs Valley ACEC
Meadow Valley 2
Halfway Wash-East
Halfway Wash - Virgin River
Mormon Mesa-Carp Elgin Road
Lake Mead NRA
UTAH
NEVADA
ARIZONA
COLORADO
WYOMING
IDAHO
NEW MEXICO
CALIFORNIA
EIS Alternative Routes
Applicant Proposed III-A
Alternative III-B
Alternative III-C
Agency Preferred III-D
Alternative Variation (Var.) or Alternative Connector (Con.)
Segment not in this Region
Terminal Siting Area
Potential Ground Electrode Siting Area
Potential Ground Electrode Site
Potential Ground Electrode Overhead Electrical Line
SDAs crossed by Project*
ACEC
NCA
National Monument
NRA
NWR
SDA not crossed by Project
*Not all SDA categories appear in each Region.
TRANSWEST EXPRESS TRANSMISSION PROJECT
Figure 3.15-3
Region III
Special Designation Areas
ACEC, NCA, National Monument, NRA, NWR, and SMA
0 10 20 40 Miles
0 10 20 40 km
1:2,000,000
N
Western AREA POWER ADMINISTRATION
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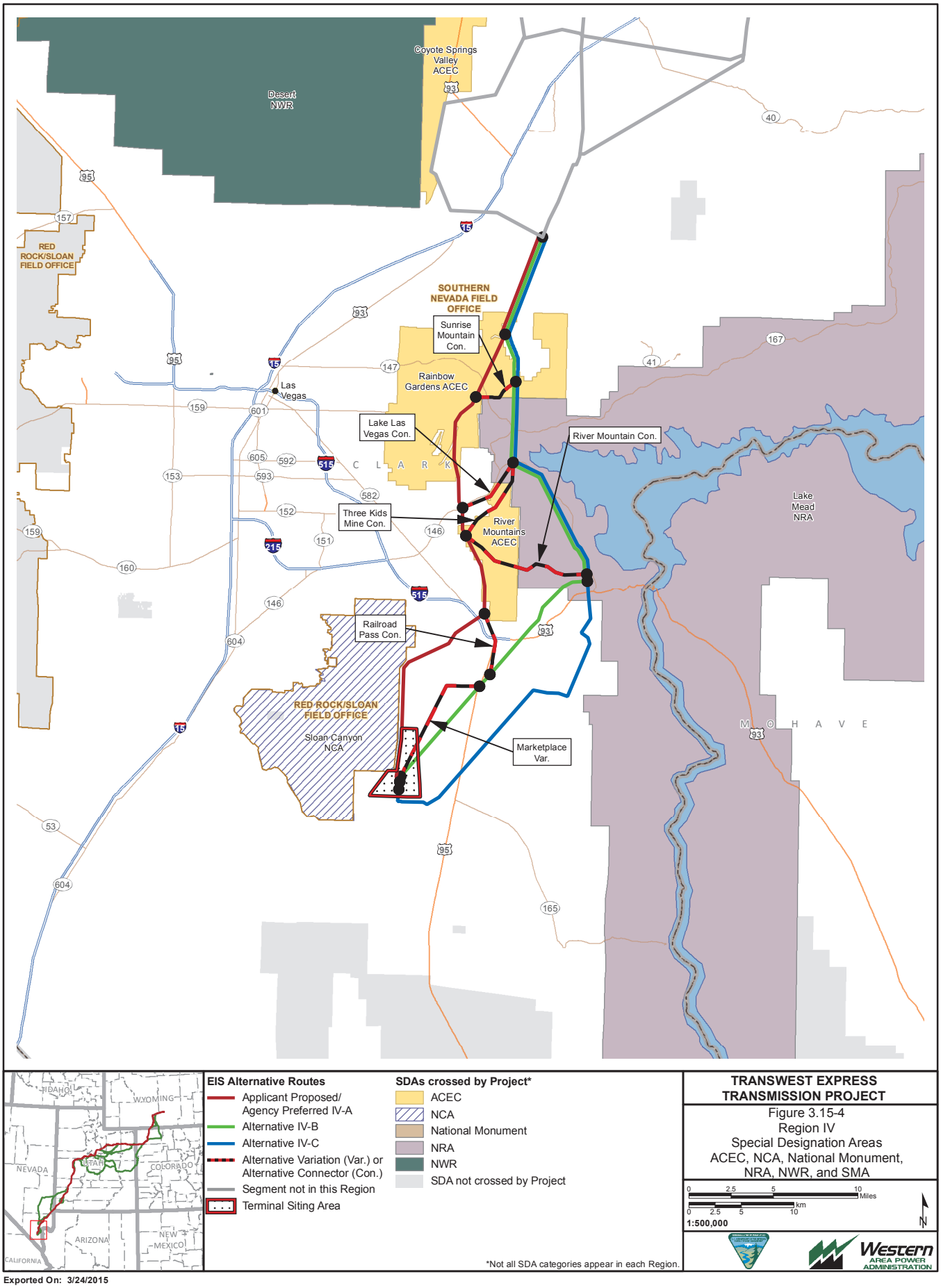
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Coyote Springs Valley ACEC
Desert NWR
RED ROCK/SLOAN FIELD OFFICE
SOUTHERN NEVADA FIELD OFFICE
Sunrise Mountain Con.
Rainbow Gardens ACEC
Las Vegas
Lake Las Vegas Con.
River Mountain Con.
Three Kids Mine Con.
River Mountains ACEC
Lake Mead NRA
Railroad Pass Con.
RED ROCK/SLOAN FIELD OFFICE
Sloan Canyon NCA
Marketplace Var.
C L A R K
M O H A V E
EIS Alternative Routes
Applicant Proposed/ Agency Preferred IV-A
Alternative IV-B
Alternative IV-C
Alternative Variation (Var.) or Alternative Connector (Con.)
Segment not in this Region
Terminal Siting Area
SDAs crossed by Project*
ACEC
NCA
National Monument
NRA
NWR
SDA not crossed by Project
*Not all SDA categories appear in each Region.
TRANSWEST EXPRESS TRANSMISSION PROJECT
Figure 3.15-4
Region IV
Special Designation Areas
ACEC, NCA, National Monument, NRA, NWR, and SMA
1:500,000
Western AREA POWER ADMINISTRATION
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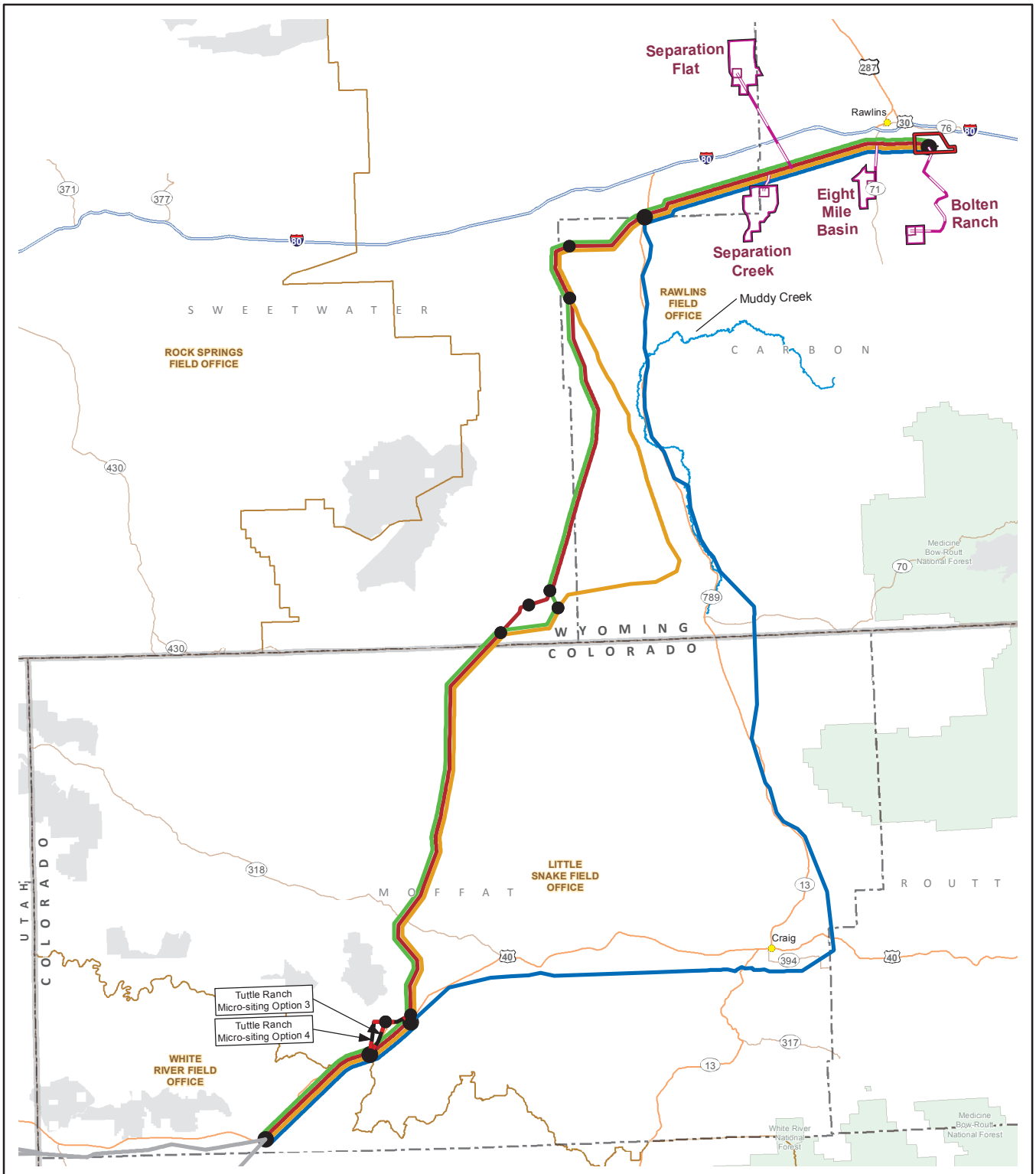
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Separation Flat
Rawlins
Eight Mile Basin
Bolten Ranch
Separation Creek
RAWLINS FIELD OFFICE
Muddy Creek
ROCK SPRINGS FIELD OFFICE
SWEETWATER
CARBON
Medicine Bow-Routt National Forest
WYOMING
COLORADO
UTAH
MOFFAT
ROUTT
LITTLE SNAKE FIELD OFFICE
Craig
Tuttle Ranch Micro-siting Option 3
Tuttle Ranch Micro-siting Option 4
WHITE RIVER FIELD OFFICE
White River National Forest
IDAHO
WYOMING
NEVADA
UTAH
COLORADO
ARIZONA
NEW MEXICO
CALIFORNIA
EIS Alternative Routes
Applicant Proposed I-A
Agency Preferred I-B
Alternative I-C
Alternative I-D
Alternative Variation (Var.) or Alternative Connector (Con.)
Segment not in this Region
Terminal Siting Area
Potential Ground Electrode Siting Area
Potential Ground Electrode Site
Potential Ground Electrode Overhead Electrical Line
SDAs crossed by Project*
WSR
Proposed Wilderness
SDA not crossed by Project
*Not all SDA categories appear in each Region.
TRANSWEST EXPRESS TRANSMISSION PROJECT
Figure 3.15-5
Region I
Special Designation Areas, Wilderness Areas, and WSRs
0 5 10 20 Miles
0 5 10 20 km
1:1,000,000
N
Western AREA POWER ADMINISTRATION
Exported On: 3/24/2015

3.15.4 Baseline Description

3.15.4.1 National Wildlife Refuges

The NWR System, managed by the USFWS, is a national system of public lands and waters set aside to conserve America's fish, wildlife, and plants. The management of individual refuge system units is dictated, in large part, by the legislation, EO, or administrative action that creates the unit. Among the most important orders and laws affecting the operation and management of refuges in the analysis area are EO 12996, the National Wildlife Refuge System Administration Act, the Refuge Recreation Act, the ESA, and the Fish and Wildlife Act of 1956. The analysis area includes portions of two of the four refuges comprising the Desert NWR complex in Region III (see **Figure 3.15-3**).

- Pahranagat NWR (5,380 acres): Established to provide habitat for migratory birds, especially waterfowl (USFWS 2012a).
- Desert NWR (1.5 million acres): Established for the protection, enhancement, and maintenance of desert bighorn sheep (USFWS 2012b).

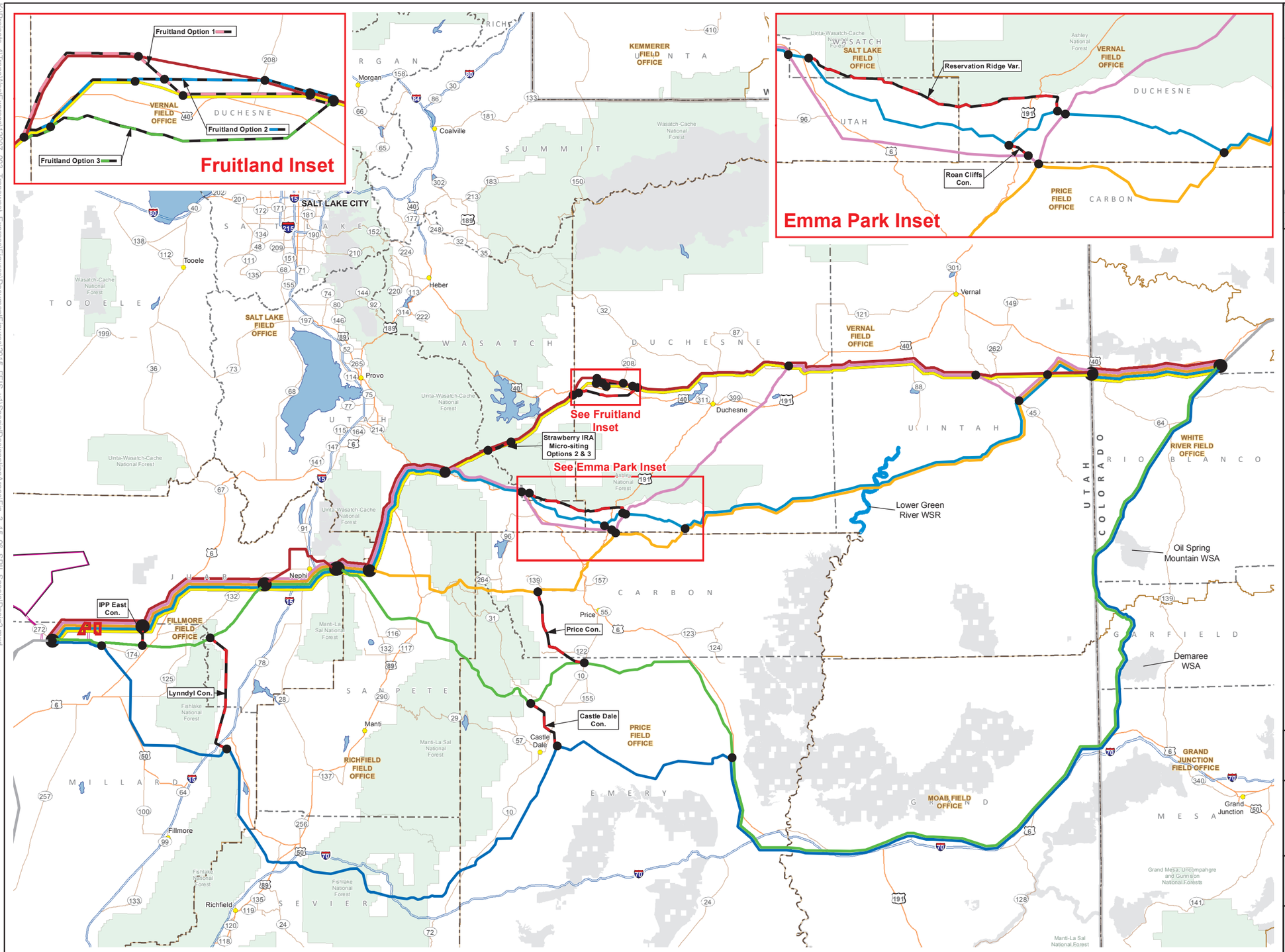
As part of the Lincoln County Conservation, Recreation, and Development Act of 2004 (P.L. 108–424), administrative jurisdiction over approximately 8,382 acres of land along the eastern boundary of Desert NWR and west of US-93 was transferred from the USFWS to the BLM for use as a utility corridor.

3.15.4.2 National Monuments

National Monuments, established through the Antiquities Act of 1906, may be presidentially or Congressionally designated to protect “objects of historic or scientific interest.” The Dinosaur National Monument is the only national monument to occur within the analysis area. It is managed by the NPS. The Dinosaur National Monument includes more than 200,000 acres of river canyons, mountains, and basins and contains world renowned geological and paleontological resources, important prehistoric petroglyphs and pictographs, and historic-era artifacts. This area also provides habitat for more than 1,000 native species of plants and animals and provides recreational access to the Yampa River (Section 3.13, Recreation Resources). The portions of Dinosaur National Monument within the Region I analysis area are the National Monument entrance from US-40 north of Elk Springs, Colorado, and portions of the approximately 12-mile Deerlodge Road closest to US-40 (see **Figure 3.15-1**). In Region II, the analysis area is just south of the Dinosaur National Monument Harper’s Corner entrance road on US-40 near Dinosaur, Utah.

As stated in the 2006 NPS Park Management Policy, Director's Order #53, and per the Organic Act and the General Authorities Act, actions would not be allowed within National Park System lands that would impair integrity of resources or values whose conservation is necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park, or key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park, or identified in the park’s general management plan or other relevant NPS planning documents as being of significance. Before approving a proposed action that could lead to an impairment of park resources and values, an NPS decision-maker must consider the impacts of the proposed action and determine, in writing, that the activity will not lead to an impairment of park resources and values. Actions cannot be approved that individually or cumulatively would:

- Be inconsistent with a park’s purposes or values;
- Affect the attainment of a park’s desired future conditions for natural and cultural resources as identified through the park’s planning process;
- Create an unsafe or unhealthful environment for visitors or employees, or diminish opportunities for current or future generations to enjoy, learn about, or be inspired by park resources or values; and



EIS Alternative Routes

- Applicant Proposed II-A
- Alternative II-B
- Alternative II-C
- Alternative II-D
- Alternative II-E
- Alternative II-F
- Agency Preferred II-G
- Alternative Variation (Var.) or Alternative Connector (Con.)
- Segment not in this Region
- Terminal Siting Area
- Potential Ground Electrode Siting Area
- Potential Ground Electrode Overhead Electrical Line

SDA crossed by Project*

- WSR
- Proposed Wilderness
- SDA not crossed by Project

*Not all SDA categories appear in each Region.

TRANSWEST EXPRESS TRANSMISSION PROJECT

Figure 3.15-6
Region II
Special Designation Areas, Wilderness Areas, and WSRs

0 10 20 40 Miles
0 10 20 40 Kilometers
1:1,200,000

N

Western AREA POWER ADMINISTRATION

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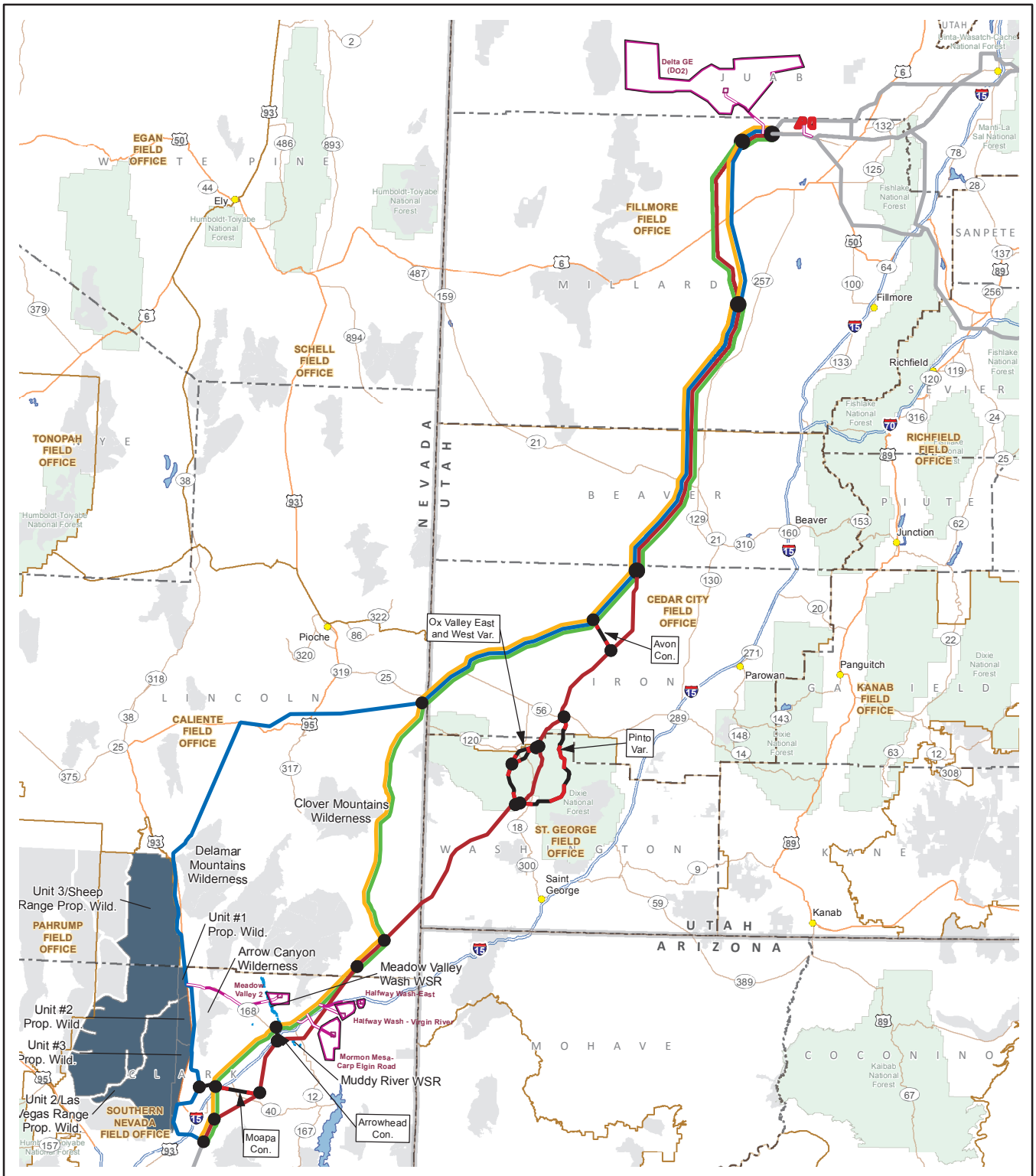
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EGAN FIELD OFFICE
FILLMORE FIELD OFFICE
SCHELL FIELD OFFICE
TONOPAH FIELD OFFICE
CEDAR CITY FIELD OFFICE
RICHFIELD FIELD OFFICE
KANAB FIELD OFFICE
CALIENTE FIELD OFFICE
ST. GEORGE FIELD OFFICE
PAHRUMP FIELD OFFICE
SOUTHERN NEVADA FIELD OFFICE
Delta GE (DO2)
Ely
Fillmore
Richfield
Beaver
Junction
Panguitch
Parowan
Pioche
Saint George
Kanab
Ox Valley East and West Var.
Avon Con.
Pinto Var.
Clover Mountains Wilderness
Delamar Mountains Wilderness
Unit 3/Sheep Range Prop. Wild.
Unit #1 Prop. Wild.
Arrow Canyon Wilderness
Unit #2 Prop. Wild.
Unit #3 Prop. Wild.
Unit 2/Las Vegas Range Prop. Wild.
Meadow Valley Wash WSR
Halfway Wash-East
Halfway Wash - Virgin River
Mormon Mesa-Carp Elgin Road
Muddy River WSR
Moapa Con.
Arrowhead Con.
Meadow Valley 2
NEVADA
UTAH
ARIZONA
COLORADO
NEW MEXICO
CALIFORNIA
IDAHO
WYOMING
EIS Alternative Routes
Applicant Proposed III-A
Alternative III-B
Alternative III-C
Agency Preferred III-D
Alternative Variation (Var.) or Alternative Connector (Con.)
Segment not in this Region
Terminal Siting Area
Potential Ground Electrode Siting Area
Potential Ground Electrode Site
Potential Ground Electrode Overhead Electrical Line
SDAs crossed by Project*
WSR
Proposed Wilderness
SDA not crossed by Project
*Not all SDA categories appear in each Region.
TRANSWEST EXPRESS TRANSMISSION PROJECT
Figure 3.15-7
Region III
Special Designation Areas, Wilderness Areas, and WSRs
0 10 20 40 Miles
0 10 20 40 km
1:2,000,000
N
Western AREA POWER ADMINISTRATION
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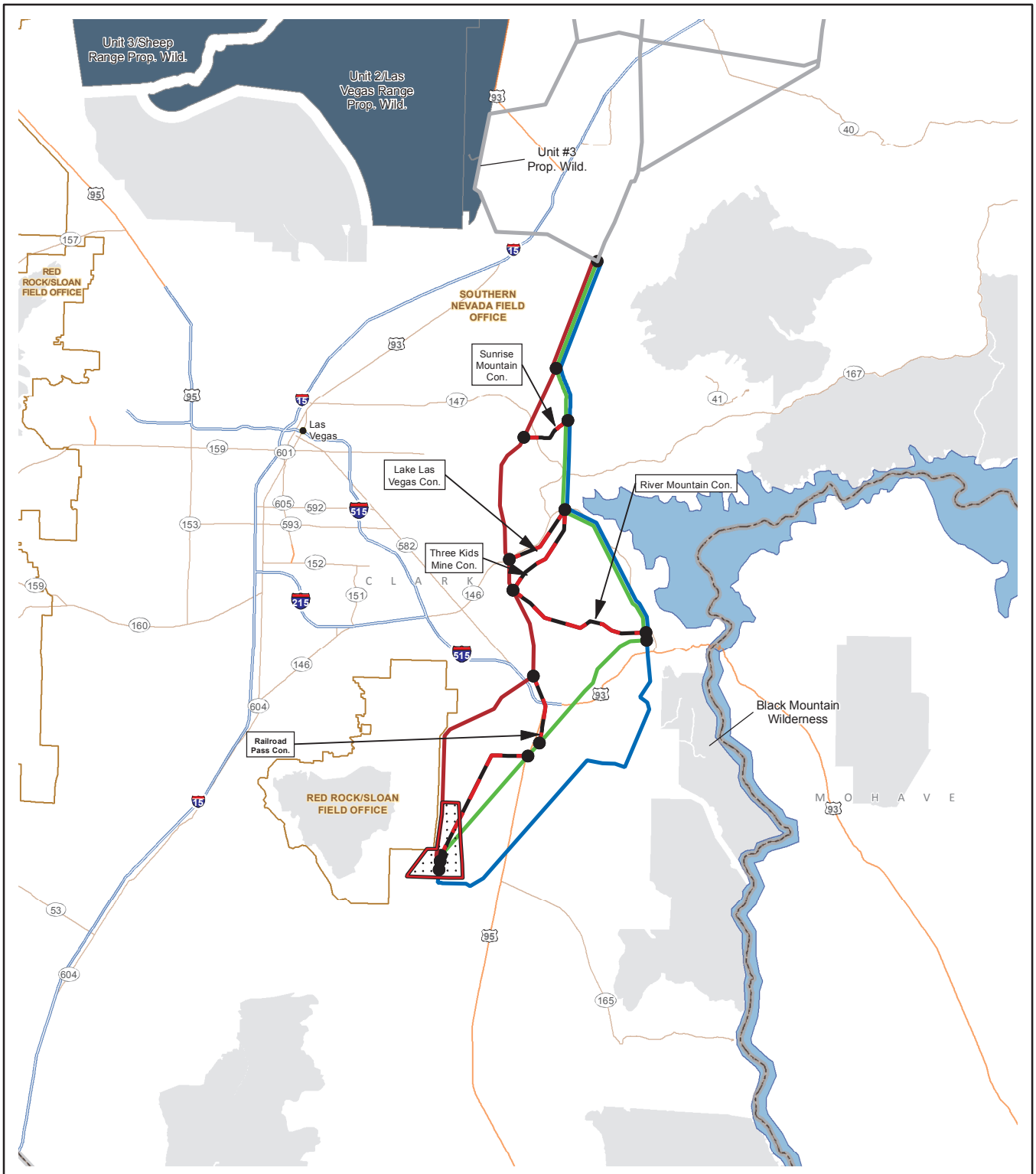

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- Unreasonably interfere with park programs or activities; or an appropriate use; or the atmosphere of peace and tranquility; or the natural soundscape maintained in wilderness and natural, historic, or commemorative locations within the park; or NPS concessioner or contractor operations or services.

Utility ROWs over lands administered by the NPS are governed by statutory authorities in 16 USC 5 (electrical power transmission and distribution, radio and TV, and other forms of communication facilities) and 16 USC 79 (electrical power, telephone, and water conduits). If not incompatible with the public interest, ROWs issued under 16 USC 5 or 79 are discretionary and conditional based on a finding by the NPS that the proposed use will not cause unacceptable impacts on park resources, values, or purposes. ROWs may be issued only pursuant to specific statutory authority, and generally, only if there is no practicable alternative to such use of NPS lands. Per Director's Order #53, where possible, taking into account both park resources and economic factors, new utility lines should be placed in conduit and underground.

The ROW for Deerlodge Road is approximately 200 feet wide, and is surrounded by private land. There is an 800-foot scenic easement along Deerlodge Road (400 feet on either side of the road). The scenic easement and road widths were Congressionally designated in 1985, pursuant to acquisition of the easement on nonfederal lands (NPS 1986a). The Dinosaur National Monument General Management Plan (NPS 1986a) states that the Deerlodge Road ROW is fully owned by the NPS; however, the NPS recently identified a 0.5-mile portion of Deerlodge Road approximately 1.5 miles from US-40 that is owned by the State of Colorado (NPS 2013a). A ROW from the NPS would not be needed to cross this section of the road. The scenic easement surrounding Deerlodge Road is owned by the NPS in areas closer to recreational use areas to the west; however, the NPS has not yet purchased the scenic easement along the portions of Deerlodge Road that are within the analysis area (NPS 2013b).

Deerlodge Road is managed as a special use management zone (which includes scenic easements along approach roads and is subject to agricultural and recreational uses that are compatible with protection of scenic values). The main purpose of this zone (aside from the road ROW) is to provide scenic protection between US-40 and Deerlodge Park, and development within the authorized easement area would diminish the visual qualities of this rangeland foreground (NPS 1986a). The GMP lists Deerlodge Road as a high priority area for scenic easement acquisition. The GMP further includes a list of compatible and incompatible uses to serve as the basis for land protection actions until the recommended interest in lands are acquired. Incompatible uses include "industrial use" (NPS 1986a).

Most traffic along Deerlodge Road occurs from May through September as rafters and kayakers take advantage of higher flows in the Yampa River from winter snow melt. Deerlodge Road is plowed in the winter, but may be closed during the winter months due to snow and snowdrifts (NPS 2013c). The NPS is prepared an EA for a proposed road improvement project, which includes resurfacing, restoring, reconstructing, bank stabilization measures, and installing new drainage measures along Deerlodge Road. The proposed Project may be constructed in two phases, depending on available funds. Phase I (proposed for 2013) would include bank stabilization along the Yampa River near milepost 9.5, and Phase II (proposed for 2016) would include the pavement rehabilitation and other parking area modifications (NPS 2013c). The portion of Deerlodge Road within the analysis area would be upgraded during Phase II.

3.15.4.3 National Recreation Areas

There is one Congressionally designated NRA located within the analysis area, the 1.5 million-acre Lake Mead NRA. The NRA is located in southeastern Nevada and northwestern Arizona and encompasses two reservoirs (Lake Mead and Lake Mohave) formed by the Colorado River, which flows through Glen Canyon NRA and Grand Canyon National Park before reaching the Lake Mead NRA. The Lake Mead NRA is managed by the NPS and as such, is subject to the provisions of the 2006 NPS Park Management Policy, Director's Order #53, and Organic Act and the General Authorities Act, identified in Section 3.15.3.2, above.

Lake Mead NRA was established on October 8, 1964, for "for general purposes of public recreation, benefit and use, and in a manner that will preserve, develop, and enhance, so far as practicable, the recreation potential, and in a manner that will preserve the scenic, historic, scientific, and other important features of the area, consistently with applicable reservations and limitations relating to such area and with other authorized uses of the lands and properties within such area" (16 USC § 440n-3). Specified allowable activities are: general recreation, grazing, mineral leasing, and vacation cabin site use. Approval of special uses may be allowed if not otherwise prohibited by law or regulation. However, the NPS can only allow uses that are: 1) appropriate to the purpose for which the park was established, and 2) can be sustained without causing unacceptable impacts (NPS 2013d).

A portion of the Boulder Basin Development Zone of the NRA is within and adjacent to the analysis area. This zone includes two heavily used developed recreational areas, Las Vegas Bay and Boulder Harbor/Beach, as well as a bluffs trail, a wetlands trail, a historic railroad trail, and a portion of the River Mountains Loop Trail. The area also offers recreational driving opportunities along Lakeshore Drive. The analysis area also includes a more remote subzone of the NRA, designated for Environmental Protection. The Lake Mead GMP (NPS 1986b) provides for general recreation and grazing in this subzone providing there is no conflict with its protection objective. The GMP notes that "various easements and utility corridors have been granted in the past. The NPS would generally oppose granting any further corridors; instead, additional use of existing corridors would be favored in the event there is a justified need for additional utility lines through the NRA" (NPS 1986b). The established utility corridors are located outside of the analysis area.

3.15.4.4 Wilderness Areas and Wilderness Study Areas

The Wilderness Act of 1964 established the National Wilderness Preservation System and a process for federal agencies to recommend wilderness areas to Congress. Wilderness, as defined by the Wilderness Act, is untrammeled (i.e., free from man's control), undeveloped, and natural, offering outstanding opportunities for solitude or primitive and unconfined recreation. Wilderness Areas have been designated within existing national parks, NWRs, national Forests, and BLM-managed public lands to be managed to preserve wilderness characteristics. Agencies typically recommend areas for wilderness designation; however, the public at large can develop its own wilderness proposal for introduction by any member of Congress.

With the passage of FLPMA in 1976, Congress directed the BLM to inventory public land for wilderness characteristics including the appearance of naturalness; outstanding opportunities for solitude or primitive and unconfined recreation; special features and values (such as ecological, geological, educational, historical, scientific, and scenic values), and manageability (adequate size; i.e., at least 5,000 acres of public lands or of sufficient size to make preservation practicable). WSAs contain wilderness characteristics and are managed to preserve those values until Congress either designates them as wilderness or releases them for other uses. ISAs are areas formally identified as "natural" or "primitive" prior to the passage of the FLPMA. These are lands identified by the wilderness review required by Section 603 of the FLPMA and, for all intents and purposes, are managed as WSAs until Congress either designates them as wilderness or releases them for other purposes. Four wilderness areas and three WSAs are located on BLM land within the analysis area. There is one area formerly designated as an ISA in the analysis area, the Sunrise Mountain ISA in the Las Vegas FO; however, the Sunrise ISA was released from further wilderness consideration in January 2014, through the 2014 Consolidated Appropriations Act. As such, the lands which were formerly managed for wilderness characteristics are now managed in accordance with the adopted Las Vegas RMP, which manages these lands as part of the Rainbow Gardens ACEC (discussed in Section 3.15, Special Designation Areas) and the Sunrise Mountain SRMA (discussed in Section 3.13, Recreation Resources). Additional information on WSAs is presented in Section 3.12, Visual Resources.

The USFWS conducts wilderness reviews to identify and recommend Refuge System lands and waters for Congressional designation. Five portions within the Desert NWR complex have been proposed for

wilderness status via the National Wilderness Preservation System (see **Table 3.15-1** and **Figures 3.15-5** through **3.15-8**).

Table 3.15-1 Designated Wilderness, Wilderness Study Areas, and Proposed Wilderness within Special Designations Analysis Area

Region	State	Management Entity	Name	Area Designation	Acreage
II	Colorado	BLM Grand Junction FO	Demaree[1]	BLM WSA	21,050
	Colorado	BLM White River FO	Oil Spring Mountain[1]	BLM WSA	18,260
III	Nevada	BLM Caliente FO	Delamar Mountains	Designated Wilderness	111,328
	Nevada	BLM Caliente FO	Clover Mountain	Designated Wilderness	85,748
	Nevada	USFWS	Unit #1	Proposed Wilderness	7,663
	Nevada	USFWS	Unit #2	Proposed Wilderness	17,404
	Nevada	USFWS	Unit #3	Proposed Wilderness	21,989
	Nevada	USFWS	Unit 2/Las Vegas Range	Proposed Wilderness	127,596
	Nevada	USFWS	Unit 3/Sheep Range	Proposed Wilderness	375,458

[1] Managing entity does not recommend area for future wilderness designation.

Note: The Sunrise Mountain ISA (Region IV, Las Vegas FO) was released from further wilderness consideration in January 2014, through the 2014 Consolidated Appropriations Act. As such, the lands which were formerly managed for wilderness characteristics are now managed in accordance with the adopted Las Vegas RMP, which manages these lands as part of the Rainbow Gardens ACEC and the Sunrise Mountain SRMA.

Sources: BLM 2008a, 1998, 1997a,b, 1987.

3.15.4.5 Wild and Scenic Rivers

WSRs were established by the Wild and Scenic Rivers Act of 1968 to protect and preserve designated rivers throughout the nation in their free-flowing condition and to protect and preserve their immediate environments. To meet the eligibility criteria, a waterway must be “free-flowing” and, along with its adjacent land area, must possess at least one “outstandingly remarkable value.” The Act provides three levels of classification: wild, scenic, and recreational. “Wild” rivers are free of dams, generally inaccessible except by trail, and represent vestiges of primitive America. “Scenic” rivers are free of dams, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads. “Recreational” rivers are readily accessible by road or railroad, may have some development along their shorelines, and may have been dammed in the past.

Within Region I (BLM Rawlins FO; see **Figure 3.15-5**), Muddy Creek was determined eligible for WSR “recreational” classification, based on hydrological factors such that the evaluated portions of the creek serve as a “textbook” example of stream rehabilitation for land managers. However, the BLM Rawlins FO ultimately determined that the creek segments did not meet suitability factors and would be given no further consideration for inclusion within the National Wild and Scenic Rivers System (NWSRS) (BLM 2008b). Accordingly, this stream has not been carried forward for analysis in this EIS.

Within Region II (Vernal FO; see **Figure 3.15-6**), a 30-mile segment of the Lower Green River, extending from the public land boundary south of Ouray, Utah, to the Carbon County line in Utah, is eligible and recommended as suitable for inclusion into NWSRS, with a tentative classification of “Scenic.” The eligible and suitable portions of the Lower Green River continue through the BLM Price FO to just north of Green River, Utah, for a total of 115 miles; however, the BLM Price FO segment of the Lower Green River is outside of the analysis area. The Vernal RMP Final EIS provides the following details regarding the outstandingly remarkable values of the Lower Green River suitable segment:

> Recreational and fish values were identified as outstanding remarkable river values for the Green River. Recreational: The slow moving river and the presence of numerous waterfowl and wildlife species provide good opportunities for fishing, hunting, waterfowl viewing, floating and camping. This segment also provides fine canoeing in an attractive pastoral setting. Fish: Two endangered fish are found in this segment of the Green River. They are the humpback chub and the Colorado squawfish.... Very few intrusions are visible from the river. Oil and gas wells can be seen near Parget Draw. Roads access the river corridor at Parget Draw, near Willow Creek, Moon Bottom, Four Mile Draw, Nine Mile Creek, and both sides of the river at Sand Wash. BLM has a ranger station, campground and boat ramp at Sand Wash. A buried pipeline crosses the river near Four Mile Draw (BLM 2008c).

The Lower Green River suitable segment is largely protected from mineral development disturbance by either being closed to mineral leasing or by NSO stipulations. NSO stipulations within the BLM Vernal FO generally correlate with ROW avoidance areas; however, the exact stipulations associated with avoidance areas vary within the RMP[1]. The suitable segment is in a limited or closed OHV category and also is protected with both VRM Class I and II categories (Section 3.12, Visual Resources, for a description of visual management categories). Additionally, the BLM Vernal RMP's Surface Stipulations Applicable To All Surface-Disturbing Activities (**Appendix K**; BLM 2008d) state the following:

> Lower Green River Corridor: Line of sight from the centerline along both sides of the Lower Green River, between the trust land boundary at Ouray and the Carbon County line would be managed as NSO.
>
> *Exception:* Future facilities would be placed within the existing ROW corridor near the Four Mile Bottom area where an existing pipeline crosses the Green River.
>
> *Modification:* None
>
> *Waiver:* None

Vernal RMP stipulation MCA-10 states that surface stipulations (including exceptions, modifications, and waivers) found in **Appendix K** would be applied to all land use authorizations, permits, and leases issued on BLM administered lands (BLM 2008d). The Vernal RMP identifies an approved utility corridor through the suitable segment that uses the Four Mile Bottom crossing.

Within Region III (Las Vegas FO; see **Figure 3.15-7**), there are two rivers that are eligible for inclusion into the NWSRS and are protected by BLM policy and authorities until a decision on suitability can be made. The suitability analysis is being completed as part of the RMP amendment process, which currently is underway. There is a tentative classification of "recreational" for an 11-mile section of the Muddy River and a tentative classification of "scenic" for an 11-mile Meadow Valley Wash riparian area (BLM 2010). Both rivers have outstanding remarkable wildlife, cultural, and fish values. Suitability of these river segments has not yet been determined.

Table 3.15-2 provides an overview of classification criteria for "scenic" and "recreational" designations. BLM Manual 6400, which provides direction for the identification, evaluation, and managements of WSR. Manual 6400 indicates that to the greatest extent possible, 1) the BLM should avoid authorizing new ROW within WSR boundaries ; 2) when processing a new ROW application, the BLM should consider routing or locating the ROW outside the WSR boundary, and determine consistency of the ROW with the

[1] Appendix K of the 2008 Vernal RMP (Surface Stipulations Applicable To All Surface-Disturbing Activities) states that NSO areas would be avoidance areas for location of public utilities and are closed to new road construction. The Minerals and Energy Resources section of the RMP states only that "rights-of-way exclusion and avoidance areas are consistent with areas closed to oil and gas leasing or with a no surface occupancy stipulation, respectively." The RMP Glossary defines Avoidance areas as: "Areas with sensitive resource values where rights-of-way and Section 302 permits, leases, and easements would be strongly discouraged. Authorization made in avoidance areas would have to be compatible with the purpose for which the area was designated and is not otherwise feasible on lands outside the avoidance area" (BLM 2008d).

river's classification, protection and enhancement of river values, and consistency with the WSR's management plan; and 3) if a new ROW is authorized in a WSR boundary, consistent with 43 CFR Parts 2800 and 2880 and to the greatest extent possible, the ROW must share, parallel, or adjoin an existing ROW, and the BLM may impose new, additional, or modified terms and conditions to maintain the classification and protect and enhance the river values. These requirements also apply to river segments that have been found to be eligible for consideration as components of the NWSRS but for which suitability has not yet been determined.

Table 3.15-2 Classification Criteria for WSR "Scenic" and "Recreational" Areas

Criteria	Scenic	Recreational
Accessibility	Accessible in places by road. Roads may occasionally reach or bridge the river. The existence of short stretches of conspicuous or longer stretches of inconspicuous roads or railroads is acceptable.	Readily accessible by road or railroad. The existence of parallel roads or railroads on one or both banks as well as bridge crossings and other river access points is acceptable.
Shoreline Development	Largely primitive and undeveloped. No substantial evidence of human activity. The presence of small communities or dispersed dwellings or farm structures is acceptable. The presence of grazing, hay production, or row crops is acceptable. Evidence of past or ongoing timber harvest is acceptable, provided the forest appears natural from the riverbank.	Some development along their shoreline. Substantial evidence of human activity. The presence of extensive residential development and a few commercial structures is acceptable. Lands may have been developed for the full range of agricultural and forestry uses. May show evidence of past and ongoing timber harvest.
Water Resource Development	Free of impoundment.	Some existing impoundment or diversion in the past. The existence of low dams, diversions, or other modifications of the waterway is acceptable, provided the waterway remains generally natural and riverine in appearance.
Water Quality	No criteria prescribed by the Wild and Scenic Rivers Act. The Federal Water Pollution Control Act Amendments of 1972 have made it a national goal that all waters of the U.S. be made fishable and swimmable. Therefore, rivers will not be precluded from scenic or recreational classification because of poor water quality at the time of their study, provided a water quality improvement plan exists or is being developed in compliance with applicable Federal and State laws.	

Sources: BLM 2008d, 1992.

3.15.4.6 National Conservation Areas

NCAs are designated by Congress to conserve, protect, enhance, and manage public lands for the benefit and enjoyment of present and future generations. **Table 3.15-3** identifies the three BLM NCAs within the analysis area, which include the McInnis Canyons NCA in Colorado (**Figure 3.15-2**), the Beaver Dam Wash NCA in Utah (**Figure 3.15-3**), and the Sloan Canyon NCA in Nevada (**Figure 3.15-4**).

Table 3.15-3 BLM National Conservation Areas

Region	Name	Management Description
Region II	McInnis Canyons NCA (123,430 acres)	Managed for the core objective of multiple uses, allowing for as wide a range of activity as possible, while protecting the resources of the CCNCA for future use and enjoyment. Per the Colorado Canyons NCA RMP (BLM 2004), "ROW proposals will be reviewed and approved on a case-by-case basis and will be subject to constraints, sensitive resource areas, and issues identified in the Colorado Canyons NCA RMP and other applicable documents and policies." Utility line proposals, from the I-70 corridor to the Colorado River or in the upper Black Ridge road area, will be required to be located underground and along the edge of or within roadways, or within the railroad ROW. Additions or modifications to aboveground utilities will only be considered within the existing utility corridors where aboveground facilities presently exist. Underground utility proposals also will be considered in these existing corridors.
Region III	Beaver Dam Wash NCA (63,500 acres)	Managed to protect important biological, ecological, historical, and scenic resources as well as diverse recreational opportunities. The NCA also provides critical habitat for Mojave Desert tortoises, a federally threatened species. Three major utility corridors, excluded from the NCA, contain roads that access electrical transmission lines, natural gas pipelines, and fiber-optic cable lines. Per the St. George RMP, new ROW and temporary use permits are strongly discouraged within the Beaver Dam Slope ACEC and shall only be authorized if no reasonable alternative exists and impacts to tortoises and their habitat can be mitigated. Surface disturbance (before restoration) resulting from all ROWs in the ACECs shall not exceed 40 acres through the life of the Project. Construction of unpaved roads could occur only if positive benefits to tortoise management would occur and would require concurrence from the USFWS. Paving would not be allowed. Speed limits exist within the ACEC. The BLM St. George FO is preparing a Management Plan to address recreation uses and facilities while protecting the special values of the NCA.
Region IV	Sloan Canyon NCA (48,000 acres)	Managed to conserve, protect, and enhance the cultural, archaeological, natural, wilderness, scientific, geological, historical, biological, wildlife, educational, and scenic resources of this area. Established in 2002, the conservation area encompasses approximately 48,000 acres. The area features significant archaeological sites, scenic vistas, important wildlife habitat, and opportunities for primitive recreation.

Sources: BLM 2006, 2004, 1999.

3.15.4.7 National/State Scenic Byways and Backways

National or state scenic byways and backways provide an opportunity for the public to experience landscapes with significant outstanding scenic, historic, cultural, natural, recreational, and archaeological qualities. Impacts to scenic byways and backways are discussed in Section 3.12, Visual Resources, and Section 3.13, Recreation Resources.

3.15.4.8 Designated National Trails

The National Trails System is a network of historic, scenic, and recreation trails created by the NTSA of 1968 (as amended) to "promote the preservation of, public access to, travel within, and enjoyment and appreciation of the open air, outdoor areas and historic resources of the Nation" [16 USC 1241].

- A *national scenic trail* (NST) is a Congressionally designated trail that is a continuous and uninterrupted extended, long-distance trail so located as to provide for maximum outdoor recreation potential and for the conservation and enjoyment of the nationally significant resources, qualities, values, and associated settings and the primary use or uses of the areas through which such trails may pass. NSTs may be located so as to represent desert, marsh, grassland, mountain, canyon, river, forest, and other areas, as well as landforms that exhibit significant characteristics of the physiographic regions of the Nation (BLM Manual 6280).
- A *national historic trail* (NHT) is a Congressionally designated trail that is an extended, long-distance trail, not necessarily managed as continuous, that follows as closely as possible and practicable the original trails or routes of travel of national historic significance. The purpose

of a NHT is the identification and protection of the historic route and the historic remnants and artifacts for public use and enjoyment. A NHT is managed in a manner to protect the nationally significant resources, qualities, values, and associated settings of the areas through which such trails may pass, including the primary use or uses of the trail (BLM Manual 6280).

- A *national recreation trail* is a trail designated by the Secretary of the Interior, or delegated officer, through a standardized process, including a recommendation and nomination by the BLM. National Recreation Trails provide a variety of compatible outdoor recreation uses in or reasonably accessible to urban areas or high-use areas. (BLM Manual 6280). National recreation trails are discussed in Section 3.13, Recreation Resources.

Within the analysis area, there is one NST and one NHT:

- Old Spanish NHT (located within Regions II and III); and
- Continental Divide NST (located within Region I).

Additionally, the Overland and Cherokee trails are currently under a feasibility study to be amended to the California NHT. Both trails are located within Region I.

National Trail Management

NSTs and NHTs are formally administered by the NPS, BLM, or USFS; however, the land along the national trails is in both public and private ownership and may include tribal lands. In 2006, a memorandum of understanding (06-SU-11132424-196) was signed by the BLM, NPS, USFWS, USFS, USACE, and FHWA to encourage long-term interagency coordination under the authority of the NTSA of 1968. Subsequent to this memorandum, the BLM has developed a series of National Trails System manuals (BLM Manuals 6250, 6280, and 8353) to provide administrative and management guidance. Once Congressionally designated, administering agencies are required to develop a Comprehensive Management Plan (CMP) or trail-wide Comprehensive Plan. BLM policy establishes that the CMP or trail-wide Comprehensive Plan is a strategic document through which the administration agency defines the nature and purpose(s) of the trail, selects the National Trail ROW, and provides general aspirational goals for the National Trail. If developed, the trail-wide CMP (and other reference documents), is then used to provide information about national trails in the development of land use planning documents (e.g., BLM FO RMPs and USFS LRMPs). For the BLM, in cases where a trail is under study or has been recommended as suitable for designation and Congress has not yet acted to designate the trail, the appropriate federal agency manages the values, characteristics, and settings of the trail in accordance with FLPMA.

To date, the Old Spanish NHT does not have a trail-wide Comprehensive Plan. A Comprehensive Plan was prepared for the Continental Divide NST in 1985 and amended in 2009.

Analysis Considerations for National Trails

Federal agencies must consider the effects of proposed actions on NSTs and NHTs under NEPA and the NTSA of 1968 [16 USC 1246]. The law states that “other uses along the trail, which will not substantially interfere with the nature and purposes of the trail, may be permitted by the Secretary charged with the administration [management] of the trail. Reasonable efforts shall be made to provide sufficient access opportunities to such trails and, to the extent practicable, efforts shall be made to avoid activities incompatible with the purposes for which such trails were established.” In addition, Section 9 (a) [16 USC 1248] states that “The Secretary of the Interior or the Secretary of Agriculture as the case may be, may grant easements and ROWs upon, over, under, across, or along any component of the national trails system in accordance with the laws applicable to the national park system and the national forest system, respectively, provided that any conditions contained in such easements and ROWs shall be related to the policy and purposes of this Act.” Analysis considerations for Designated National Trails under NEPA and the NTSA of 1968 [16 USC 1246], include:

- The extent to which the proposed action would affect the BLM's ability to effectively manage the nature and purposes of the trail, and the resources, qualities, values, and associated settings, and the primary use or uses; and
- The extent to which the proposed action would require a major relocation of the National Trail Management Corridor in order to provide for the conservation and enjoyment of the nationally significant resources, qualities, values, and associated settings, and the primary use or uses of the areas through which such trails may pass, or the primary use or uses of the trail.

Additional Considerations for National Historic Trails

NHTs differ from "regular" trails, which generally can be described, inventoried, and managed as one linear route. The Federal Geographic Data Committee Federal Trail Data Standards (USDA and USDOI 2011) describe NHTs as an informal "corridor," rather than a single line on a map. Each "NHT corridor" is composed of the trail route (both Congressionally designated as well as the route and sites where history actually occurred if different from the designated route), associated heritage sites, associated settings, and recreation and/or interpretive trail/road/sites that people can use.

Per BLM Manual 6280, NHTs are to be managed "to recognize the nationally significant resources, qualities, values, and associated settings of the areas through which such trails may pass, including the primary use or uses of the trail. Federal Protection Components associated with the NHT, including high potential historic sites, and high potential route segments, as well as auto tour routes are identified by the National Trail administering agency through the trail-wide Comprehensive Plan." The NTSA of 1968 and other applicable legislation define "high potential routes" as those offering visitors a high quality recreation experience in a portion of the route having greater than average scenic values or affording an opportunity to vicariously share the experience of the original users of a historic route. "High potential historic sites" refers to those sites related to the route or sites in close proximity thereto, which provide opportunity to interpret the historic significance of the trail during the period of its major use. To meet the goals of the NTSA for NHTs, federal agencies must identify and protect not only the physical remnants of high potential route segments and high potential historic sites (16 USC 16 1251) associated with the route, but its nature and purposes as well.

Three primary assessment tools are used to characterize NHTs: Condition Category classification, VRI data, and historic integrity assessments.

The NHT Condition Categories are federal standard classifications designed to assess the comparative character of visible trail remnants observed at the time of mapping for all NHTs. NHT Condition Categories encompass: 1) documentation of the historic location; and 2) presence (or lack) of visible trail remnants and/or artifacts that provide evidence of the historic route. There are six NHT Condition Categories:

- NHT I – Location verified, evident, and unaltered;
- NHT II – Location verified and evident with minor alteration;
- NHT III – Location verified with little remaining evidence;
- NHT IV – Location verified and permanently altered;
- NHT V – Location approximate or not verified; and
- NHT VI – Location verified with historic reconstruction.

NHT Condition Categories are applicable to the heritage resource component of the NHT and not to the recreation or interpretive components, and do not reflect the character or integrity of the NHT setting or surrounding landscape.

The VRI process provides land managers with a means for determining visual values. VRI classes represent the relative value of the visual resources and provide the basis for considering visual values in the resource management planning process. In the BLM or USFS VRI process, public lands are divided into Scenic Quality Rating Units (SQRUs) and rated on apparent scenic quality, which is determined using seven key factors: landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications. Rating classes are Class A (high): 19 or more points, B (average): 12 to 18 points, Class C (low): 11 or less points. Section 3.12, Visual Resources, provides more information regarding VRI. As discussed in Section 3.12, Visual Resources, the Project would result in no less than a minus four (-4) points in total. Thus, Class A could be reduced to Class B based on an existing SQRU score of 19 to 22, and Class B could be reduced to Class C if the existing SQRU were in the 12 to 15 point range.

The NRHP defines historic integrity as "a property's historic identity evidenced by the survival of physical characteristics from the property's historic or pre-historic period. The seven qualities of integrity are location, setting, feeling, association, design, workmanship, and materials." Historic integrity is determined by the extent to which the general character of the historic period is evident and the degree to which incompatible features obscuring that character are present (and in some cases, whether they can be reversed) (AECOM 2012).

National Trails within the Analysis Area

Continental Divide National Scenic Trail

There is one NST within Region I of the analysis area: the CDNST (**Figure 3.15-9**). The 3,100-mile CDNST runs along the Rocky Mountains from Canada to Mexico. Administered by the USFS, a CMP was developed in 1985 and amended in 2009. As stated in the CMP, the trail's nature and purpose is "to provide for high-quality scenic, primitive hiking and horseback riding opportunities and to conserve natural, historic, and cultural resources along the CDNST corridor" (USFS 2009). The BLM Rawlins FO RMP also provides management actions to emphasize interpretive and education opportunities, including designation of a 600-acre CDNST SRMA to emphasize interpretive and educational opportunities and to ensure the continued availability of outdoor recreation opportunities associated with the trail. The SRMA contains the 82 miles of CDNST located on federal lands within the Rawlins FO. Recreation activities within the SRMA include backpacking, mountain biking, camping, hunting, OHV use, picnicking, and wildlife viewing. The SRMA is an avoidance area for linear utility systems.

The portion of the CDNST and SRMA that potentially would be crossed by the Project is located south of Rawlins, Wyoming, approximately 2 miles south of I-80. The general area includes dispersed residential development, an existing transmission line and RMP-designated utility corridor, a state penitentiary, and a variety of industrial facilities. As a result, there are limited recreation opportunities along this section of the trail. The BLM Rawlins FO's VRI has given this area a rating of Class B (average).

Overland and Cherokee Trails (Potential National Trails)

The Cherokee Trail is most commonly known for its use as an alternative route to the Oregon Trail, but also it served as a transportation route for freight, cattle, and passengers between Utah and Colorado to the Union Pacific Railroad in Wyoming. One segment of the southern route of the Cherokee Trail eventually became known as the Overland Trail, which was heavily used by immigrants and prospectors,

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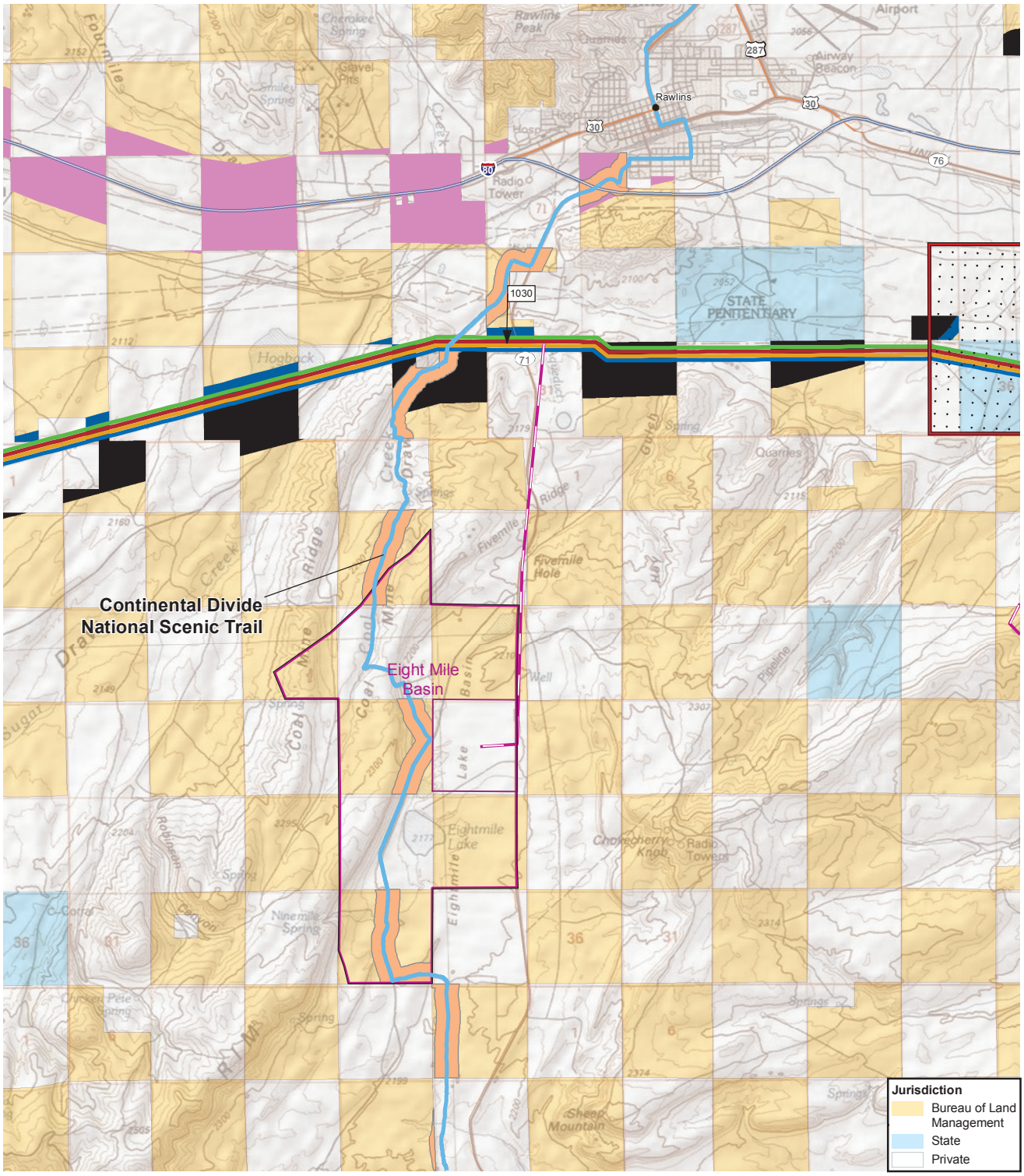

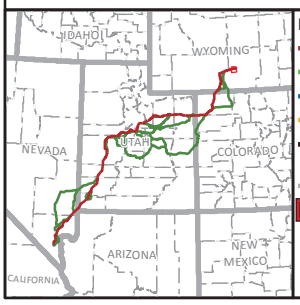

EIS Alternative Routes
- Applicant Proposed I-A
- Agency Preferred I-B
- Alternative I-C
- Alternative I-D
- Alternative Variation (Var.) or Alternative Connector (Con.)
- Segment not in this Region
- Terminal Siting Area
- Potential Ground Electrode Siting Area
- Potential Ground Electrode Site
- Potential Ground Electrode Overhead Electrical Line
- Continental Divide National Scenic Trail
- Special Recreation Management Area

Designated Utility Corridors

WWEC
- All

RMP and LRMP
- All
- Underground Only

TRANSWEST EXPRESS TRANSMISSION PROJECT

Figure 3.15-9
Region I
Continental Divide National Scenic Trail

0 0.5 1 2 Miles
0 0.5 1 2 km
1:100,000

N

Western AREA POWER ADMINISTRATION

Exported On: 2/19/2015

largely as an alternative route to the Oregon Trail. The Overland and Cherokee trails currently are under a feasibility study to be amended to the California NHT (NPS 2011). A CMP was developed by the NPS for the California NHT in 1999, which likely would be modified after the completion of the feasibility study for the Overland and Cherokee Historic Trails. As stated in the California NHT 1999 CMP, the nature and purpose of the California NHT is to "enable all people to envision and experience, in a coherent and convenient way, the heritage and impacts on the western overland migration" (NPS 1999).

The BLM Rawlins FO has provided management direction in their 2008 RMP to protect resources associated with these historic trails, including a NSU stipulation within 0.25 mile or the visual horizon to the trail, whichever is closer (see **Appendix C**, Section C.3). The RMP also stipulates that actions resulting in linear crossings of the trails will occur in previously disturbed areas and be managed in accordance with BMPs and sections of the historic trails with intact trail traces will be preserved in their present condition (BLM 2008b). Per the BLM Rawlins FO RMP, non-contributing segments are not managed for the preservation of historic values. The RMP provides no management with regard to compliance with the BLM National Trails Manuals series, which were recently released. NHT Condition Category and historic integrity assessment data are not available for these trails.

The Overland Trail traverses the BLM Rawlins FO for approximately 18 miles and generally is parallel to I-80. There are three portions of the Overland Trail that potentially would be crossed by the Project alternatives within Region I. **Figure 3.15-10** shows the location of the Overland and Cherokee trails as related to the alternatives. From east to west, the trail crossing locations would be as follows:

- Crossings would occur along SH-789, approximately 18 miles south of the intersection of SH-789 and I-80, and along the 38-mile section of SH-789 from Baggs to I-80, which is part of the 205-mile Outlaw Trail Scenic Highway. There is an interpretive sign located on SH-789 where the Overland Trail crosses the highway. The trail crossing would be located on private land within the confines of a designated utility corridor. Scenic quality is low in this area (Class C). East of SH-789, the Overland Trail generally parallels Muddy Creek. Washakie Station, one of the few associated historic sites with standing ruins, is located less than 4 miles east of the highway.
- A crossing would be approximately 16 miles south of Wamsutter, Wyoming, about 0.25 mile east of the Overland Trail's intersection with Wamsutter Road. The crossing would be located approximately 0.25 mile south of an unnamed oil and gas access road on private land. There are numerous well pads and access roads in the area and no recreation facilities or interpretive features are located near these trail segments. Scenic quality is low in this area (Class C).
- A crossing is approximately 16 miles south of Wamsutter, Wyoming, about 2 miles west of the Overland Trail's intersection with Wamsutter Road and almost directly adjacent to Eureka Headquarters Road. The trail crossing would be located on private land. There are numerous well pads and access roads in the area and no recreation facilities or interpretive features are located near these trail segments. Duck Lake Station, an associated historic site, would be about 3 miles to the west of the crossing. Nothing remains at this site. Scenic quality is low in this area (Class C).

The Cherokee Trail traverses the BLM Rawlins FO in an east-west direction, crossing SH-789 approximately 6 miles south of Dad, Wyoming, and 15 miles north of Baggs, Wyoming. The Cherokee Trail continues west just north of Flat Top Mountain, then drops to the southwest and follows the Powder Rim along a series of small washes. There are five portions of the Cherokee Trail that potentially would be crossed by the Project alternatives. From east to west, the trail crossing locations would be as follows:

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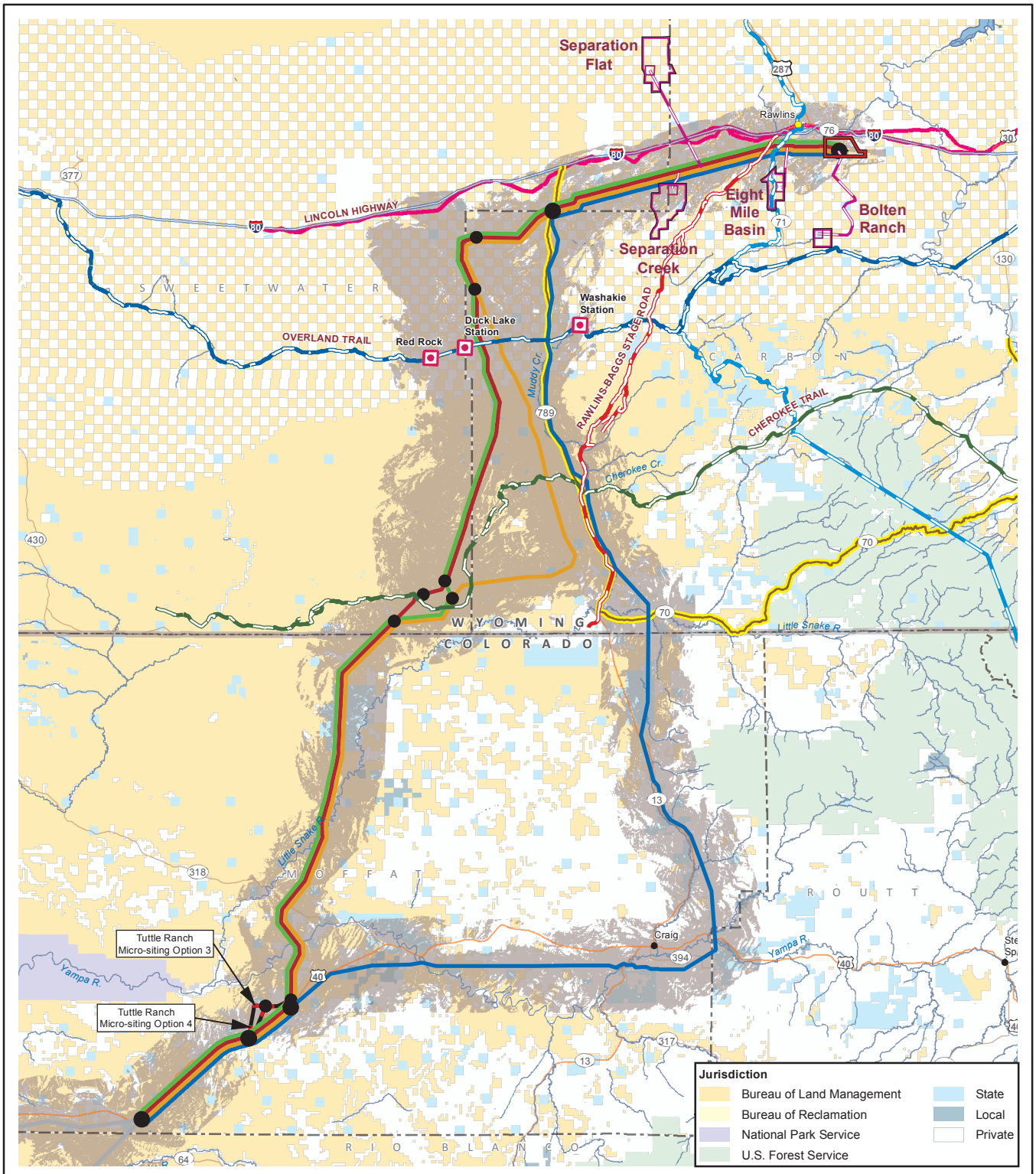
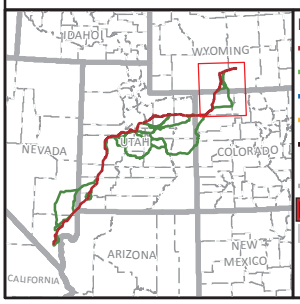




EIS Alternative Routes
- Applicant Proposed I-A
- Agency Preferred I-B
- Alternative I-C
- Alternative I-D
- Alternative Variation (Var.) or Alternative Connector (Con.)
- Segment not in this Region
- Terminal Siting Area
- Transmission Line Visibility to 5 Miles
- Potential Ground Electrode Siting Area
- Potential Ground Electrode Site
- Potential Ground Electrode Overhead Electrical Line
- Associated Historic Site
- Overland Trail
- Cherokee Trail - Southern Route
- Rawlins-Baggs Stage Road
- Continental Divide National Scenic Trail
- Lincoln Highway
- Scenic Byways/Backways

TRANSWEST EXPRESS TRANSMISSION PROJECT

Figure 3.15-10
Region I
Overland and Cherokee Trails

0 5 10 15 20 Miles
0 5 10 15 20 km
1:1,000,000

N

Western AREA POWER ADMINISTRATION

Exported On: 2/19/2015

- A crossing would be approximately 12 miles north of Baggs and less than 1 mile east of SH-789. The trail crossing would be directly to the east of Muddy Creek and to the south of Cherokee Creek (which generally parallels the Cherokee Trail route in this area). These two perennial water sources are associated with the Cherokee Trail in that they undoubtedly influenced its location. There are no interpretive signs located on SH-789 and no associated historic sites located near these trail segments. The trail crossing would be located on BLM land, immediately east of (but outside of) a designated utility corridor. Scenic quality is average in this area (Class B).
- A crossing would be approximately 14 miles north of Baggs and approximately 3 miles west of SH-789. The trail crossing would be 4 miles east of North Flat Top Mountain and adjacent to an improved dirt road used for access to oil and gas well pads. There are no associated historic sites, recreation facilities, or interpretive features located near these trail segments. The trail crossing would be located on BLM land and would not be within a designated utility corridor. Scenic quality is average in this area (Class B).
- A crossing would be approximately 13 miles west of Baggs, Wyoming, near the convergence of Shell Creek Stock, Poison Butte, and W. Hangout Roads. The Cherokee Trail is located about 0.5 mile east of a large wash (Sand Creek) that ultimately drains into the Little Snake River, and approximately 0.2 mile south of an unnamed perennial wash/stream. There are no associated historic sites, recreation facilities, or interpretive features located near these trail segments. Aerial topography indicates there is an old dirt road in this area, as well as some other surface disturbances, perhaps from oil and gas exploration activities. The trail crossing would be located on BLM land and would not be within a designated utility corridor. Scenic quality is low in this area (Class C).
- A crossing would be approximately 13 miles west of Baggs, Wyoming, and 3.5 miles southwest of the Sand Creek crossing. The Cherokee Trail is located adjacent to a small ephemeral wash. There are no disturbed areas near the proposed crossing. There are no associated historic sites, recreation facilities, or interpretive features near trail segments in this area. The trail crossing would be on BLM land and would not be within a designated utility corridor. Scenic quality is average in this area (Class B).
- A crossing would be approximately 20 miles west of Baggs, Wyoming, at a point where the Cherokee Trail runs in a north-south direction adjacent to an unnamed dirt road. The crossing would be about 0.5 mile south of the Cherokee Trail Road (where the Cherokee Trail turns due west) and 0.5 mile northwest of the Cherokee Reservoir. There are no associated historic sites, recreation facilities, or interpretive features located near these trail segments. The trail crossing would be located on BLM land, but not within a designated corridor. Scenic quality is average in this area (Class B).

Old Spanish National Historic Trail

The Old Spanish NHT was designated as such on December 4, 2002, by the Old Spanish Trail Recognition Act of 2002, to be co-administered by the BLM and NPS. The NHT consists of a trail network overlain on Native American trails that crossed the expanse of the Colorado Plateau and the Mojave Desert, followed by trappers and traders from the 1820s through the 1840s to reach a variety of destinations, including but not limited to California. Much of the network was later incorporated into improved wagon road travel routes. There are portions of the Old Spanish NHT in Regions II, III, and IV; however, inventoried analysis units (AUs) only occur within the analysis area in Regions II and III.

Although no Class III inventories or in-depth visual analyses have been conducted to date for the Project, the EIS analysis of impacts to the Old Spanish NHT was supported with data obtained from the National Historic Trails Inventory Project (AECOM 2012). The 2012 National Historic Trails Inventory Project was not conducted for the Project, but was a separate endeavor conducted by the BLM using American Recovery and Reinvestment Act funding and staff resources to develop and apply new inventory and management tools that include consistent standards for trail resource documentation, protection, use, and preservation. A total of six NHTs across the western U.S. were investigated as part of the 2012 NHT Inventory. Of these six trails, only the Old Spanish NHT is located within the analysis area.

The Old Spanish NHT inventory is organized by 52 distinct AUs (i.e., selected route segments, sites, features, or trail resources). Each trail segment within an AU was categorized under the NHT Condition Categories. In order to identify high potential route segments for the purposes of future analyses during CMP development, the 2012 National Historic Trail Inventory Project considered the NHT Condition Category in conjunction with two setting components, scenic quality and the historic integrity of the setting (described earlier in this section). These were combined to result in a composite setting rating.

	Scenic Class A	**Scenic Class B**	**Scenic Class C**
Retains Integrity	SI	SI	SII
Diminished Integrity	SII	SIII	SIII

The composite setting rating was then arrayed against the NHT Condition Category to derive an overall rating.

	SI	SII	SIII
NHT I/II	Exceptional Expression of NTSA Values	Exceptional Expression of NTSA Values	Notable Expression of NTSA Values
NHT III	Notable Expression of NTSA Values	Evident Expression of NTSA Values	High potential segment
NHT IV-VI	Evident Expression of NTSA Values	High potential segment	High potential segment

The following sections discuss the general location of the Old Spanish Trail by region; agency management of the portions of the trail within the analysis area; and the trail resources, qualities, values, and associated settings, and the primary use or uses within the analysis area.

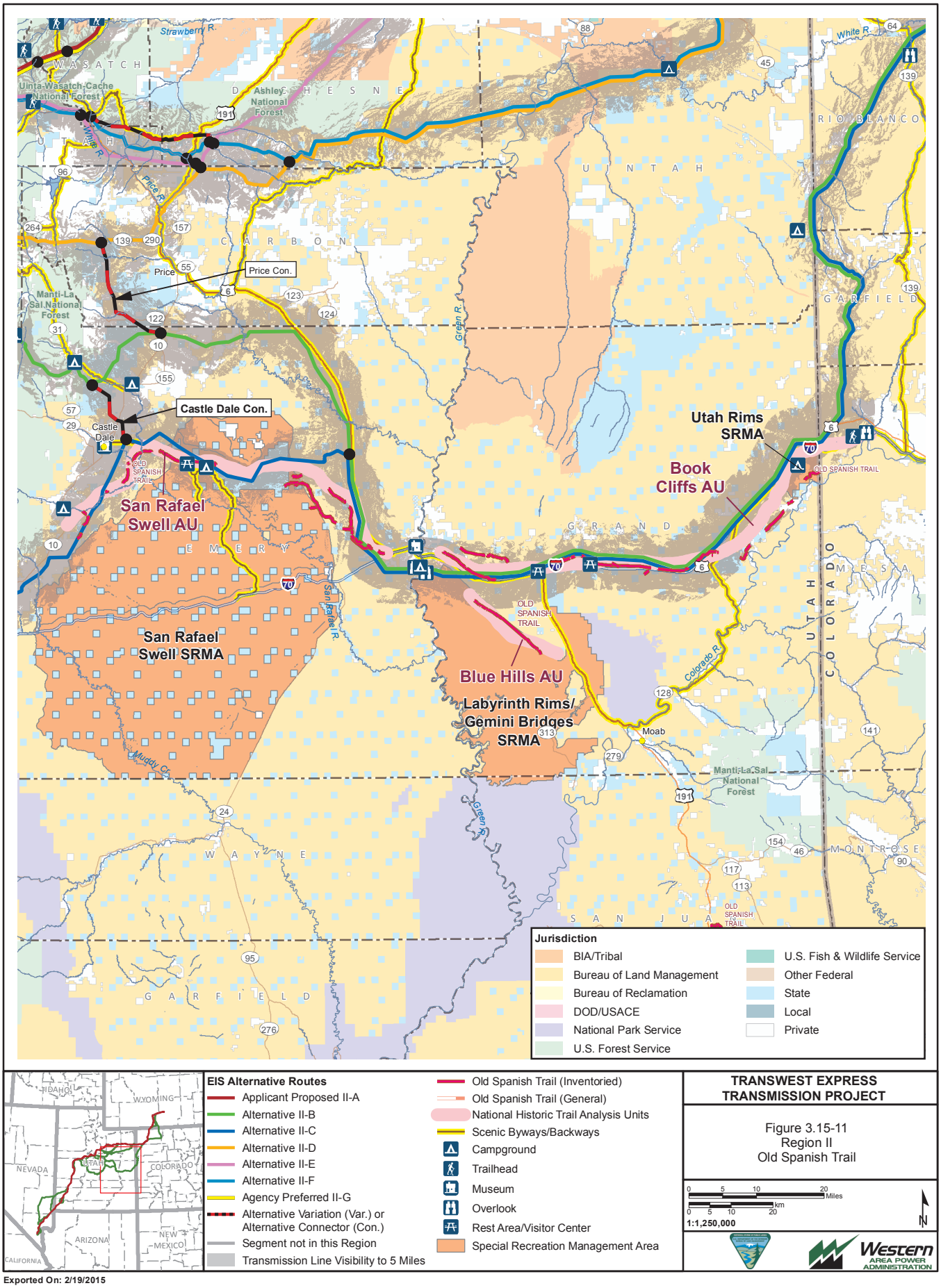
Region II

Within Region II, the Old Spanish NHT follows a portion of the Colorado River west of the community of Fruita in Mesa County, Colorado; it continues west into Grand County, Utah (BLM Moab FO) along a highway corridor (US-6/US-50/I-70) just below the Book Cliffs mountain range. Thereafter, the trail turns north-northwest through the San Rafael Desert and reaches its northernmost point in the northern half of the San Rafael Swell in Emery County (BLM Price FO). The Old Spanish NHT main route continues in a generally southwestern direction across Utah, along the US-89 corridor until the Town of Junction, Utah, at which point the trail enters Region III, crossing the mountains separating US-89 from the I-15 corridor at Cedar City (Iron County).

Both the BLM Moab and Price FOs have included management direction for Old Spanish NHT in their 2008 RMPs. However, these RMPs predate the issuance of BLM National Trails Manual policy for study trails and have not defined a National Trail Management Corridor. The Moab RMP indicates that it will consider a plan amendment, as necessary, to incorporate provisions of the forthcoming Old Spanish NHT CMP (BLM 2008e).

The Region II analysis area also includes the three AUs inventoried as part of the 2012 NHT Inventory: Book Cliffs, Blue Hills, and the San Rafael Swell AUs. **Figure 3.15-11** identifies the location of each AU corridor, including associated historic sites and key recreation and natural features, as related to the alternatives within the analysis area. Existing conditions of these AUs are as follows:

- Book Cliffs AU (BLM Moab FO). This AU contains portions of the Old Spanish NHT northern route and generally is located along I-70 from the Colorado border to the Green River area. There are 62 miles of inventoried trail within the AU; approximately 11 miles are NHT-II and rated as having an “exceptional” expression of NTSA values. The remaining 51 miles of trail are primarily considered to be “high potential.” Condition Category II segments occur in the east and west portions of the AU (AECOM 2012). The eastern portion of the Book Cliffs AU is located slightly south of and generally parallel to I-70. The Old Spanish NHT route is evident through this area as a two-track road or a long swale. Integrity of historic setting is retained, and scenic quality is average (Class B), resulting in an overall setting rating of SI (AECOM 2012). The easternmost portion is partially located within the Utah Rims SRMA. The SRMA focuses on motorized, mechanized, and non-motorized routes for the rapidly growing Grand Junction area and contains several camping areas. The portion of I-70 east of Utah SH-128 is part of the Dinosaur Diamond Prehistoric Byway.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Price Con.
Castle Dale Con.
Utah Rims SRMA
Book Cliffs AU
San Rafael Swell AU
San Rafael Swell SRMA
Blue Hills AU
Labyrinth Rims/ Gemini Bridges SRMA
Uinta-Wasatch-Cache National Forest
Ashley National Forest
Manti-La Sal National Forest
OLD SPANISH TRAIL
Jurisdiction
BIA/Tribal
Bureau of Land Management
Bureau of Reclamation
DOD/USACE
National Park Service
U.S. Forest Service
U.S. Fish & Wildlife Service
Other Federal
State
Local
Private
EIS Alternative Routes
Applicant Proposed II-A
Alternative II-B
Alternative II-C
Alternative II-D
Alternative II-E
Alternative II-F
Agency Preferred II-G
Alternative Variation (Var.) or Alternative Connector (Con.)
Segment not in this Region
Transmission Line Visibility to 5 Miles
Old Spanish Trail (Inventoried)
Old Spanish Trail (General)
National Historic Trail Analysis Units
Scenic Byways/Backways
Campground
Trailhead
Museum
Overlook
Rest Area/Visitor Center
Special Recreation Management Area
TRANSWEST EXPRESS TRANSMISSION PROJECT
Figure 3.15-11
Region II
Old Spanish Trail
1:1,250,000
Exported On: 2/19/2015

Central Portion of the Book Cliffs AU. This AU is primarily located along I-70. The Old Spanish NHT route exists as a section of an old highway or a barely evident grass swale. Trail segments in this area have diminished historic setting and low scenic quality (Class C) where it is adjacent to I-70 and railroad features, resulting in an overall rating of SIII (AECOM 2012). This portion of I-70 is not part of the Dinosaur Diamond Prehistoric Byway. There is one rest stop along this portion of the highway at Thompson Springs (milepost 189). The rest stop offers brochures and maps and provides access for hiking and nearby Native American rock art at Sego Canyon.

Western Portion of the Book Cliffs AU. This AU is located along I-70 west of US-191. The Old Spanish NHT route is marked, variously, as a section of an old highway, a single-track path, or a barely evident grass swale. At least one inscription from 1837 occurs within this segment. Integrity of historic setting is retained in the west sections of this AU (especially along the northern portion), and scenic quality is average (Class B), resulting in an overall rating of SI in the northern segment (AECOM 2012). This portion of I-70 adjacent to the trail is part of the Dinosaur Diamond Prehistoric Byway. The Crescent Junction rest stop (located at milepost 181, at the turnoff to US-191) offers a view of the Cisco Desert and Book Cliffs, but has no interpretive sites. The BLM Moab FO RMP includes a management decision to acquire public access to the site of the Old Spanish NHT ford of the Green River, upstream from the Town of Green River, Utah, for the purpose of developing an interpretive site (BLM 2008f). To date, there is no interpretive site located in this area; however, the John Wesley Powell Museum is located in the Town of Green River, adjacent to the modern river crossing, and offers historical interpretation displays and other visitor information.

- The Blue Hills AU (BLM Moab FO). This AU contains portions of the Old Spanish NHT main route and generally is located south of the Green River, where the Old Spanish NHT main route joins the Old Spanish NHT northern route. In places, the Old Spanish NHT route is visible as wagon ruts or a narrow swale; in other places, any trace of the trail has been obscured by a bladed road. Integrity of historic setting is retained throughout this AU with only a few intrusions, and scenic quality is average (Class B) over most of the AU, resulting in an overall rating of SI. There are13 miles of inventoried trail within the AU; approximately 3 miles are NHT-II and rated as having “exceptional” expressions of NTSA values. An additional 0.5 mile of trail is rated as having “notable” expressions of NTSA values. The remaining 10 miles of inventoried trail are considered to be “high potential.” The northern portion of this AU is located within the Labyrinth Rims/Gemini Bridges SRMA. The portion of the SRMA nearest this AU is mostly managed for river recreation, and there are no developed camping areas located near the trail segment. US-191 (which is a portion of the Dinosaur Diamond Prehistoric Byway) is located to the east of the trail segments. A small airport is located at the south end of the AU.
- The San Rafael Swell AU (BLM Price FO). This AU includes portions of the Old Spanish NHT northern route and generally is located between Green River and Castle Dale, Utah, with additional portions extending south to Emery, Utah. There are 58 miles of inventoried trail within the AU; approximately 15 miles are NHT-II and rated as having “notable” expressions of NTSA values. The remaining 43 miles of trail are considered to be high potential. Trail segments are generally located west of US-6 just north of the turnoff from I-70 and the Town of Green River (Lost Springs Wash/Trail Springs Wash and Green River Crossing-Cottonwood Wash to Big Flat trail segments), and within portions of the San Rafael Swell between Little Cedar Mountain RA and Castle Dale, Utah (the Big Flat to Walker Flat trail segments). There are a few trail segments located south of Castle Dale (between Ferron and Emery, Utah), about 1 mile east of US-89. The Old Spanish NHT route is marked, variably, by two-track, bladed gravel roads and swales. Integrity of historic setting varies along this AU. Overall, historic setting is retained, but somewhat diminished. Scenic quality primarily is low (Class C) within the AU, with the exception of the Green River Crossing to Big Flat segments, which are rated as average (Class B). The overall rating of the San Rafael Swell AU is SIII (AECOM 2012).The Lost Springs Wash/Trail Springs Wash segment is managed to preserve the historic character of the landscape, while providing for recreation opportunities and other resource values (BLM 2008f). The area provides motorized recreation (limited to designated routes), is VRM Class III, and is a designated ROW

avoidance area except where the designated utility corridor crosses the trail. There are no identified historic or interpretive sites within this area. The Green River Crossing (via Cottonwood Wash) to Big Flat segment is managed to preserve the historic character of the landscape while providing for recreation opportunities and other resource values (BLM 2008f). The area provides motorized recreation (limited to designated routes), contains VRM Class I, II, and III areas, and allows ROWs only in the designated utility corridor. There are two areas within this segment that were important watering places and appear to have been used extensively for camping (Big Hole and Little Hole). There also is one potential historic site in this area, the possible Gunnison Expedition camp (AECOM 2012).The Big Flat to Walker Flat segment and portions of the Green River Crossing to Big Flat segment largely parallel CR-401 (also known as the Green River cutoff) and SR-10. There is interpretive signage in several locations along CR-401. The trail segments nearest to Little Cedar Mountain are located on state lands and are not included in the 2012 NHT Inventory. For the purposes of this analysis, it was assumed that the quality of these trail segments is similar to the rest of Big Flat to Walker Flat, and that these segments also would be rated as high potential. Within the San Rafael Swell, the Big Flat to Walker Flat segment is managed for motorized recreation use, and there are several recreational areas near the trail, most notably the Wedge Overlook/Buckhorn Drive Scenic Backway. There is a visitor center at the junction of Wedge Road and CR-401. The area contains VRM Class I, II, and II areas and allows ROWs only in the designated utility corridor. The portion of the AU within the San Rafael Swell also is part of the San Rafael Swell SRMA. The SRMA is managed to provide motorized and recreational opportunities and contains numerous hiking and OHV trails, largely located to the south of the Old Spanish Trail segments. There are no identified historic or interpretive sites within this area; however, the Museum of San Rafael in Castle Dale, Utah, contains displays of Old Spanish NHT artifacts. South of Castle Dale, the trail segments run generally parallel to SR-10, but on the east side of the towns of Ferron and Emery (about 3 miles east of the highway). Portions of the trail are within a designated utility corridor.

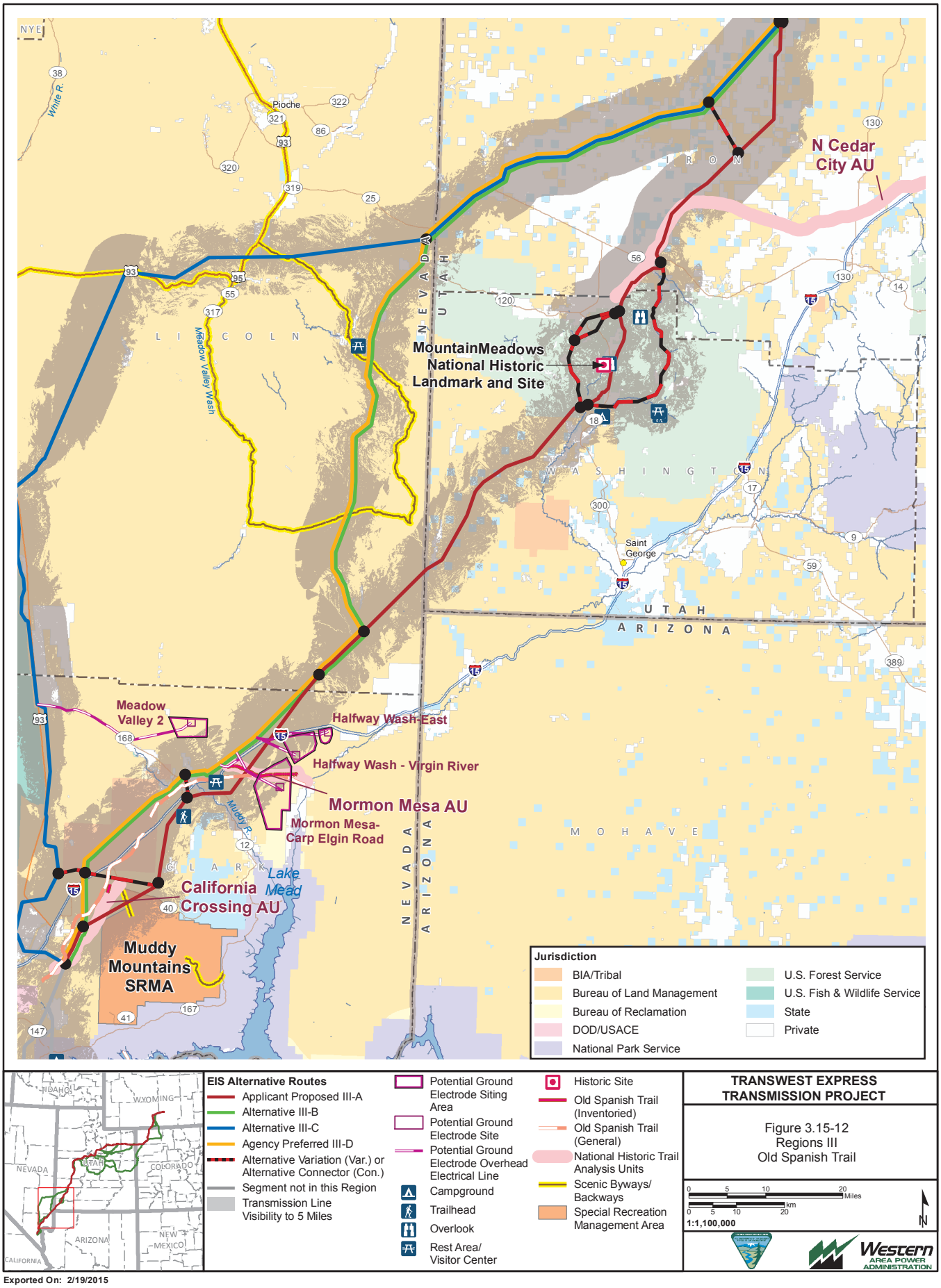
Portions of the Fishlake National Forest, located southwest of the San Rafael Swell AU, also contain segments of the Old Spanish Trail. The 2012 NHT Inventory did not inventory trail segments on non-BLM lands; thus, there is no information regarding the Scenic Class, historic integrity, or resulting overall setting rating for these trail segments. BLM lands directly to the west of the NFS lands are Class C. For the purposes of this analysis, these lands are assumed to have similar scenic quality.

Region III

Within Region III, the northern route of Old Spanish NHT continues west of Cedar City in Iron County, Utah (BLM Cedar City FO), then turns south through the Dixie National Forest, and continues west and then south to the Mormon Mesa area near the Utah-Nevada border (BLM St. George and Caliente FOs), rejoining I-15 and generally paralleling the highway corridor across the Virgin River to about where I-15 intersects with US-93 (the Great Basin Highway).

The BLM Ely District RMP and the BLM St. George, Cedar City, and Las Vegas FO RMPs predate the issuance of BLM National Trails Manual policy for study trails and have not defined a National Trail Management Corridor. The Dixie National Forest LRMP provides some protection of the trail through management areas but does not address the Old Spanish NHT in its LRMP with regard to a defined National Trail Management Corridor or Management Plan.

The Region III analysis area includes three of the AUs inventoried as part of the 2012 NHT Inventory: N. Cedar City, Mormon Mesa, and California Crossing; the remaining mileage has not been inventoried. **Figure 3.15-12** identifies the location of these AU corridors within the analysis area, including historic sites and key recreation and natural features as related to the alternatives and ground electrode areas within the analysis area. The general location of mapped but uninventoried trail mileage within the BLM Las Vegas FO and the Dixie National Forest also is depicted in **Figure 3.15-12**. Existing conditions of these AUs are as follows: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N Cedar City AU
MountainMeadows National Historic Landmark and Site
Meadow Valley 2
Halfway Wash-East
Halfway Wash - Virgin River
Mormon Mesa AU
Mormon Mesa-Carp Elgin Road
California Crossing AU
Lake Mead
Muddy Mountains SRMA
Pioche
Saint George
Meadow Valley Wash
Muddy R.
White R.
L I N C O L N
I R O N
C L A R K
M O H A V E
N E V A D A
U T A H
A R I Z O N A
W A S H I N G T O N
Jurisdiction
BIA/Tribal
Bureau of Land Management
Bureau of Reclamation
DOD/USACE
National Park Service
U.S. Forest Service
U.S. Fish & Wildlife Service
State
Private
EIS Alternative Routes
Applicant Proposed III-A
Alternative III-B
Alternative III-C
Agency Preferred III-D
Alternative Variation (Var.) or Alternative Connector (Con.)
Segment not in this Region
Transmission Line Visibility to 5 Miles
Potential Ground Electrode Siting Area
Potential Ground Electrode Site
Potential Ground Electrode Overhead Electrical Line
Campground
Trailhead
Overlook
Rest Area/ Visitor Center
Historic Site
Old Spanish Trail (Inventoried)
Old Spanish Trail (General)
National Historic Trail Analysis Units
Scenic Byways/ Backways
Special Recreation Management Area
IDAHO
WYOMING
NEVADA
UTAH
COLORADO
ARIZONA
NEW MEXICO
CALIFORNIA
TRANSWEST EXPRESS TRANSMISSION PROJECT
Figure 3.15-12
Regions III
Old Spanish Trail
0 5 10 20 Miles
0 5 10 20 km
1:1,100,000
N
Western AREA POWER ADMINISTRATION
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- The N. Cedar City AU (BLM Cedar City FO). The AU generally is located northwest of Cedar City and directly north of Dixie National Forest. This AU is identified in the 2012 NHT Inventory as including portions of the Old Spanish NHT northern route; however, trail segments have not been inventoried and they are primarily located on private lands. The scenic quality in this AU is primarily low (Class C) with a small portion of Class B (average) on the eastern side of the AU. There are no known associated historic sites, interpretive sites, or recreation facilities located in this AU. While not evaluated as part of the inventory, this AU is assumed to have a moderate to low setting integrity given its generally low scenic quality.
- The Mormon Mesa AU (BLM Las Vegas FO). This AU includes portions of the Old Spanish NHT northern route. The AU generally is located between I-15 and the Virgin River, near Logandale, Nevada. There are 12 miles of inventoried trail segments within the AU; approximately 8 miles are NHT-I and II and occur as a nearly continuous trail trace. These segments are rated as having an "exceptional" expression of NTSA values; the remaining 4 miles are rated as having "evident" expressions of NTSA values. Within the Mormon Mesa AU, the Old Spanish NHT route can be seen but is utilized by OHVs in some locations. Remnants of stone retaining walls occur in segments where the trail traverses the escarpment between Mormon Mesa and the Virgin River floodplain. The Meadow Valley Wash and the Muddy River are located near the AU. Integrity of historic setting is retained throughout this AU, and scenic quality over most of the AU is average (Class B) except for the easternmost area along the Virgin River, which has high scenic quality (Class A), resulting in an overall rating of SI (AECOM 2012). There are no interpretive signs or recreation facilities, but there is a rest stop located on the side of the highway opposite the trail segment. There are no associated historic sites located near these segments. There is a vehicle pullout on southbound I-15 rest stop. The pullout does not provide interpretive materials related to the Old Spanish NHT.
- The California Crossing AU (BLM Las Vegas FO). This AU includes portions of the Old Spanish NHT northern route. The AU is located about 20 miles northeast of Las Vegas, east of I-15, near the intersection of I-15 and US-93 (the Great Basin Highway). There are three miles of inventoried trail within the AU; approximately one mile is NHT II and rated as having "exceptional" expressions of NTSA values; the remaining two miles are rated as high potential segments. At most locations within the inventoried three-mile segment, no specific trail location or trace could be identified. One segment with well-sorted gravels and two faint ruts was identified. Integrity of historic setting is retained with only a few minimal intrusions. Scenic quality is low (Class C), resulting in an overall rating of SII (AECOM 2012). There are no associated historic sites, interpretive sites, or recreation facilities located near these segments.

For the purposes of this analysis, the portions of uninventoried BLM trail mileage surrounding these AUs are assumed to generally have expression of NTSA values that are similar to the inventoried units.

Within the Dixie National Forest, the Old Spanish Trail generally parallels Mogotsu Creek north and west of Central, Utah. The Mountain Meadows NHL and Site, an associated historic site, is located along the trail. SR-18, which generally parallels the trail, is a popular route for motorized recreation. Trail segments within the Dixie National Forest (of which approximately 15 miles are in the analysis area) were not evaluated in the 2012 National Historic Trails Inventory Report for NHT Condition Category or composite setting ratings, but they are assumed to have a high setting integrity given the high scenic quality, associated natural features (such as the Mogotsu Creek), and high number of historic sites.

Region IV

Region IV contains three routes of the Old Spanish NHT: the northern route, the Armijo route, and the Mojave route. The northern route of the Old Spanish NHT continues in a southwesterly direction from the I-15/ US-93 (the Great Basin Highway) intersection in Region III through the Las Vegas Valley (to the west of and outside of the analysis area) to Tecopa, California and eventually, Los Angeles. The Armijo route (used by the first pack train to pass from Santa Fe, New Mexico to Los Angeles in 1830 and led by a Santa Fe merchant, Antonio Armijo) follows the Virgin River to historical confluence with the Colorado

River (now part of Lake Mead, east of the main route and outside of the analysis area) and then heads west generally along the Las Vegas Wash and points beyond, eventually joining the main route near Tecopa. The Las Vegas Wash, which historically contained flows from rain water before manmade alternation of drainage patterns in the Las Vegas Valley, is an important associated natural feature of the Old Spanish NHT Armijo route and undoubtedly influenced the location of that route. The third route, the Mojave route, branches off the Armijo route just west of the Virgin/Colorado river confluence and heads south along the west flank of the River Mountains and then along a route that is generally followed by the present-day US-95. The Mojave route eventually joins the other routes near Barstow, California. **Figure 3.15-13** identifies the location of northern route, the Armijo route and the Mojave route within the Region IV analysis area.

There are no identified AUs and no information on composite setting rating or NHT condition class for either the Armijo or Mojave route for any trail mileage within the Region IV analysis area, as these trail segments were not included in the 2012 NHT Inventory. For the purposes of this analysis, the portions of the Old Spanish NHT Armijo and Mojave routes within the analysis area where the proposed action or alternatives could cross or affect trail setting are have been grouped into AUs based on geography and/ or land management. The northern route mileage in Region IV is discussed in terms of its similarity in setting to the California Crossing AU (Region III), which is located just to the north.

Existing conditions of the Old Spanish NHT Armijo route AUs are as follows:

- East Las Vegas Wash AU. This AU includes the 4-mile stretch of the Old Spanish NHT Armijo route located along Las Vegas Wash between Lake Mead and Northshore Road, the eastern boundary of the Lake Las Vegas planned community, and the access route to the northern shore of Lake Mead. Lands within this AU are managed by the NPS as part of the Lake Mead NRA. The AU includes the point where the Mojave route diverges from the Armijo route. There are no existing transmission lines or designated utility corridors in the AU. There is one developed campground about 0.5 mile east of the point where the two routes split; the Wash has no other adjacent development. The associated setting of this AU includes Las Vegas Wash, the Lake Mead area (the historical Virgin – Colorado River confluence), and the geography that led to the development of the Wash and the rivers as perennial water sources. Scenic quality in within and near this AU is rated as high (Class A). While not evaluated as part of the 2012 NHT Inventory, this AU is assumed to have a high setting integrity given its high scenic quality and lack of development. There are no known Old Spanish NHT historic or interpretive sites located within or near this AU.
- Lake Las Vegas AU. This AU includes the 2-mile stretch of the Old Spanish NHT Armijo route located along the Las Vegas Wash between Northshore Road and Lake Las Vegas Parkway. Lands within this AU are privately owned and have been developed to include a 320-acre manmade lake along the original location of the Las Vegas Wash surrounded by residential areas, two golf courses, a resort, and retail areas. The associated setting of this AU is no longer readily evident due to extensive development. Scenic quality within and near this AU is rated as high to average (Class A and Class B). While not evaluated as part of the 2012 NHT Inventory, this AU is assumed to have a low setting integrity given its extensive alteration. There are no known Old Spanish NHT historic or interpretive sites located within or near this AU.

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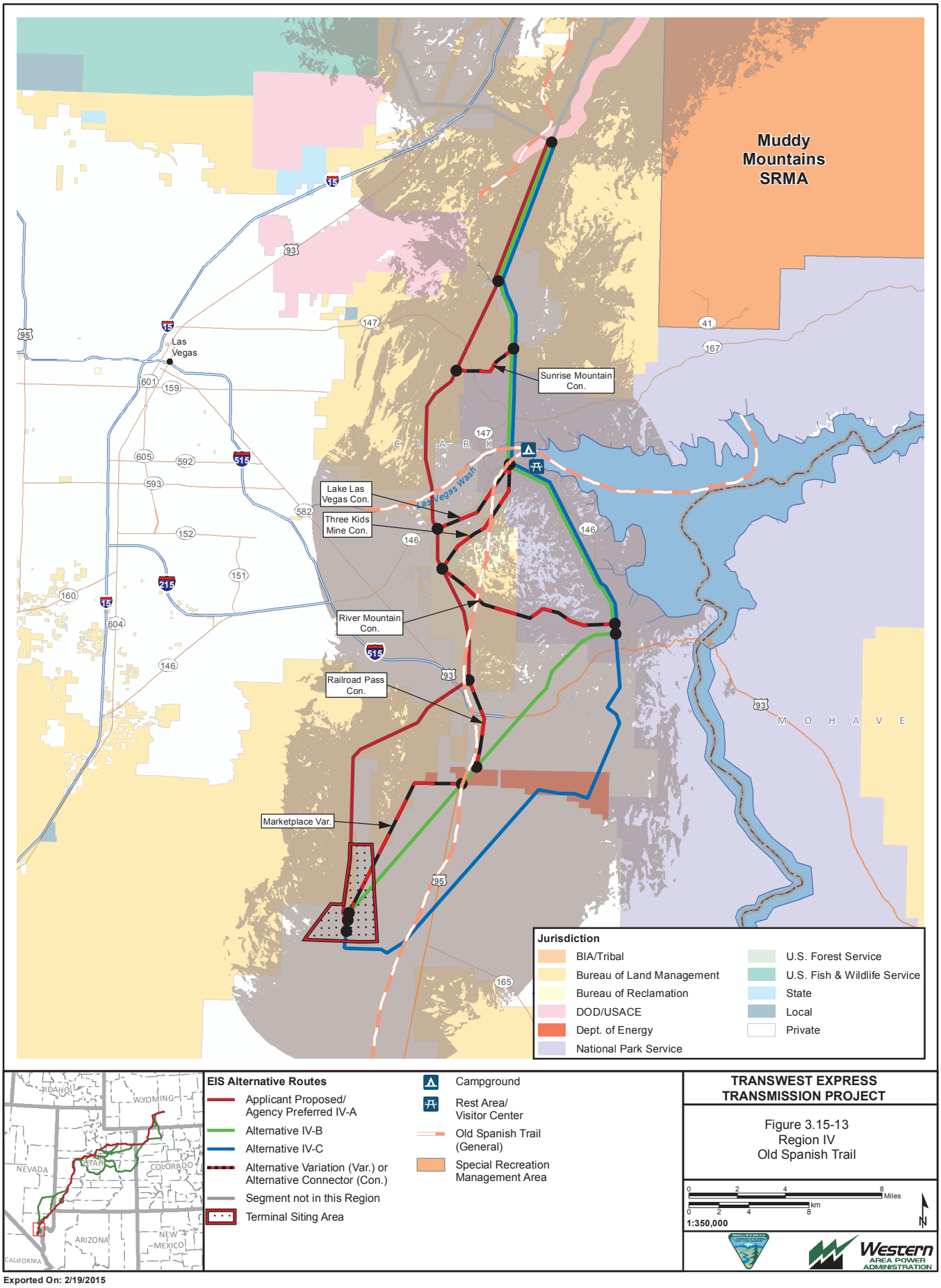

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- Clark County Wetlands Park AU. This AU includes the 6-mile stretch of the Old Spanish NHT Armijo route located within the Clark County Wetlands Park, a 2,900-acre nature and wildlife habitat viewing area bordering both sides of Las Vegas Wash. The Wetland Park runs from various water treatment plants near the natural beginning of Las Vegas Wash to where the Wash flows under Lake Las Vegas Parkway and Lake Las Vegas. The Wetlands Park features a 100-acre nature preserve area with concrete walking trails, graveled secondary trails, and a Nature Center containing displays depicting how Las Vegas Wash looked before major settlement occurred. There is a small city park (Terrazza Park) located on the south side of the Wash, between the Wetlands Park boundary and Lake Las Vegas Parkway (which serves as the entrance to the Lake Las Vegas development). There are three existing transmission lines located just east of Terrazza Park. The associated setting of this AU includes of Las Vegas Wash and the geography that led to the development of the Wash as a perennial water source. Scenic quality within and near this AU is rated as high to average (Class A and Class B). While not evaluated as part of the 2012 NHT Inventory, this AU is assumed to have moderate setting integrity due to the presence of several existing transmission lines that detract from its high to average scenic quality and its preservation/interpretation elements). Cultural resources surveys that have been conducted in the Las Vegas Wash/Clark County Wetlands Park have found no evidence of the Old Spanish Trail. There is a foundation remains of the masonry structure at the eastern end of the Wetlands Park called the “Old Spanish House”; however, none of the artifacts recovered from the interior support the speculation that the structure is affiliated with the Old Spanish NHT (Bureau of Reclamation 2014). There are currently no interpretative materials related to the Old Spanish NHT, nor are there any planned for the future (Clark County 2014).

Existing conditions of the Old Spanish NHT Mojave route AUs are as follows:

- East Las Vegas Wash to River Mountains AU. This AU includes the 2.5-mile stretch of the Old Spanish NHT Mojave route between Las Vegas Wash (the origin point for the Mojave route) and the northern base of the River Mountains, as defined by the location of the River Mountains Loop Trail, 35-mile multi-use trail managed by the City of Henderson, Bureau of Reclamation, Boulder City, and NPS that encircles the River Mountains. The area within this AU is managed by the NPS as part of the Lake Mead NRA and is generally undeveloped. Lakeshore Road, a main access road to the east side of the Lake Mead NRA, crosses the Old Spanish NHT Mojave route about 1 mile from Las Vegas Wash. Scenic quality within and near this AU is rated as high (Class A). While not evaluated as part of the 2013 NHT Inventory, this AU is assumed to have a high to moderate setting integrity given is high scenic quality, and relative lack of development. There is an Old Spanish NHT interpretive marker (Historical Marker #141) at the intersection of E. Lake Mead Parkway /Lakeshore Road and the River Mountains Loop Trail.
- River Mountains AU. This AU includes the 8-mile stretch of the Old Spanish NHT Mojave route located along the western foothills of the River Mountains. This AU is bounded at both ends by the River Mountains Loop Trail (which encircles the mountains). This AU includes areas lands by the BLM and the Bureau of Reclamation. The River Mountains are generally undeveloped; much of the western portions are managed as an ACEC by the BLM to protect bighorn sheep habitat and the scenic viewshed for Henderson and Boulder City. There are several existing transmission lines located within this AU, as well as an open pit mine, numerous unpaved roads, a waste water treatment plant, and a residential area that abuts the River Mountains Loop Trail. The mapped route of the Old Spanish NHT Mojave route crosses the existing transmission lines and is less than 1 mile from the mine, a wastewater treatment and the residential neighborhood. Scenic quality within and near this AU is generally rated as high (Class A) and average (Class B). While not evaluated as part of the 2013 NHT Inventory, this AU is assumed to have a moderate setting integrity due to the presence of several existing transmission lines that detract from its high to average scenic quality. There are no known Old Spanish NHT historic or interpretive sites located near within this AU, but there is an interpretive marker for the “Arrowhead Trail” that identifies the trail route as that of the Old Spanish NHT. The sign is

located about 2.5 miles west of the mapped Old Spanish NHT Mojave route, in Mission Hills Park (managed by the City of Henderson).

- Railroad Pass to Searchlight. This AU includes the 45-mile stretch of the Old Spanish NHT Mojave route between the River Mountains and Searchlight, Nevada that is generally located adjacent to present-day US-95. Most the land within this US is private; the final 15 miles of this AU are managed by the BLM as part of the Piute/Eldorado ACEC to protect desert tortoise critical habitat. Within this AU, the Old Spanish NHT Mojave route is crossed once by I-515/ US-95/93 at the southern base of the River Mountains (in an area known as Railroad Pass) and several times by US-95 between Railroad Pass and Searchlight. Scenic quality within and near this AU is rated as low (Class C). While not evaluated as part of the 2013 NHT Inventory, this AU is assumed to have a low setting integrity due to the presence of multiple existing transmission lines and low scenic quality. There are no known Old Spanish NHT historic or interpretive sites located near this AU.

3.15.4.9 Designated National Historic Landmarks and Districts

There is one NHL within the analysis area, the Mountain Meadows NHL and Site in Washington County in southwestern Utah (within Region III). This NHL marks where 120 emigrants, most of them from Arkansas, were massacred by Southern Utah settlers and some Paiute Indians under the direction of local Mormon leaders. The landmark and district is composed of a discontiguous district made up of two parcels, capturing two known locations of the events that occurred from September 7 through 11, 1857, and later burial, commemoration, and memorialization efforts that continue to the present. The two parcels comprise approximately 760 acres of the existing approximately 3,000-acre NRHP historic district, which was listed in 1975. Portions of the parcels are separately managed by the USFS and the Church of Jesus Christ of the Latter Day Saints. Impacts to the Mountain Meadows NHL and Site historic landmark and district are discussed in detail in Section 3.11, Cultural Resources and Native American Concerns; Section 3.12, Visual Resources; and Section 3.13, Recreation Resources.

3.15.4.10 Designated Roadless Areas and Unroaded/Undeveloped Areas

Inventoried Roadless Areas

IRAs are identified as areas of NFS land currently inventoried for planning purposes as roadless. The 2001 Roadless Area Conservation Rule (36 CFR 294.13(b)(2)) prohibits road construction, road reconstruction, and timber harvesting on IRAs on NFS lands. IRAs were designated primarily to preserve existing quality habitat, sustained and supported by the absence of fragmentation from roads, construction and mining or timber harvesting activities. Criteria for IRA designation are size (5,000 acres or more, or the area must be contiguous to existing wilderness, primitive areas, or potential wilderness; a self-contained ecosystem [such as an island]; or have physical terrain or natural conditions that would allow preservation) and lack of permanently authorized roads.

In addition, the Roadless Rule contains nine attributes that contribute to roadless area evaluation:

1. High quality or undisturbed soil, water, and air;
2. Sources of public drinking water;
3. Diversity of plant and animal communities;
4. Habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land;
5. Primitive, Semi-Primitive Non-Motorized, and Semi-Primitive Motorized classes of dispersed recreation that provide recreation opportunities in areas with wilderness-like attributes but allow mechanized travel;
6. Reference landscapes of relatively undisturbed areas that serve as a barometer to measure the effect of development on other parts of the landscape;

7. Natural appearing landscapes with high scenic quality;
8. Traditional cultural properties and sacred sites; and
9. Other locally identified unique characteristics, such as uncommon geological formations, unique wetland complexes, or social, cultural, or historical characteristics.

Wilderness attributes also may be affected by land-disturbing activities that occur in IRAs. The specific categories of wilderness quality that are considered for impacts include:

- Untrammeled (Is the land unhindered and free from modern human control or manipulation?).
- Natural (Are the land's ecological systems substantially free from the effects of modern civilization?).
- Undeveloped (Is the land essentially without permanent improvements or modern human occupation?).
- Outstanding opportunities for solitude or primitive/unconfined recreation (Can the land provide a solitary and natural recreation experience?).
- Special features (Does the land possess special ecological, geologic, scenic, or other significance?).
- Manageability (Can the land be managed to meet the wilderness size criteria of 5,000 acres?).

The Roadless Rule does not prohibit special use developments such as transmission lines, nor does it strictly prohibit multiple use activities on these lands. The Final Rule/Record of Decision (USFS 2001) focuses on road construction, reconstruction, and timber harvest in inventoried roadless areas because "they have the greatest likelihood of altering and fragmenting landscapes, resulting in immediate, long-term loss of roadless area values" and acknowledges that although other activities also may compromise roadless area values, they are best reviewed through local land management planning. Paragraph (b)(2) of the Roadless Rule (36 CPR § 294.13(b)(2)) allows timber cutting, sale, or removal in inventoried roadless areas when incidental to implementation of a management activity not otherwise prohibited by the Rule. Examples of these activities include utility corridors (USFS 2001).

Unroaded/Undeveloped Areas

Pursuant to prior NFMA implementing regulations at 36 CFR 219.17 (as published in 36 CFR 200 to 299 [July 1, 2000 edition]), and using inventory procedures found in the Forest Service Handbook 1909.12, Chapter 71, the national forests each created an inventory of draft URUD areas. These were formally initiated with NOIs in 2002 (FR 11 67[90]:31178 and 67[91]:31761, respectively), with the purpose of identifying potential wilderness areas in the NFS during upcoming LRMP revision efforts. The Uinta National Forest Planning Area[2], which completed its LRMP in 2003, has already evaluated draft URUD lands into LRMP management direction. For those national forests that did not complete their LRMP revisions (Fishlake, Dixie, Manti-La Sal, and Ashley National Forests), this information represents the latest inventory data for areas with potential wilderness qualities or attributes. The 2005 draft inventories of URUD areas were based on direction in the Intermountain Region Planning Desk Guide: A Protocol for Identifying and Evaluating Areas for Potential Wilderness (USFS 2004). Wilderness attributes to be considered in the analysis of impacts to URUD areas are the same six attributes described above under IRAs. However, there is no policy, law, or directive guiding the management of identified draft URUD

[2] In March 2008, the Uinta National Forest and the Wasatch-Cache National Forest were combined into one administrative unit (Uinta-Wasatch-Cache National Forest). Each of these forests continues to operate under individual forest plans approved in 2003. The term "Uinta National Forest Planning Area" is used to refer to the portion of the Uinta-Wasatch-Cache National Forest managed under the 2003 LRMP for the Uinta National Forest.

areas that lie outside of IRAs or wilderness areas; the only guidance for these areas is general forest or management area direction in the current LRMPs.

There are 17 IRAs and 11 URUD areas within the analysis area. These areas are listed in **Table 3.15-4** and shown in **Figures 3.15-14** through **3.15-17**. As shown on the figures, IRAs and URUD areas overlap considerably, but not entirely. **Appendix H** contains supporting information regarding the existing condition of the nine IRA natural resources attributes and the six wilderness attributes that apply to both IRAs and URUD areas. Additional information regarding Project impacts can be found in the IRA/URUD area worksheets contained in the Project Record.

Table 3.15-4 IRA/Unroaded-Undeveloped Areas in Analysis Area

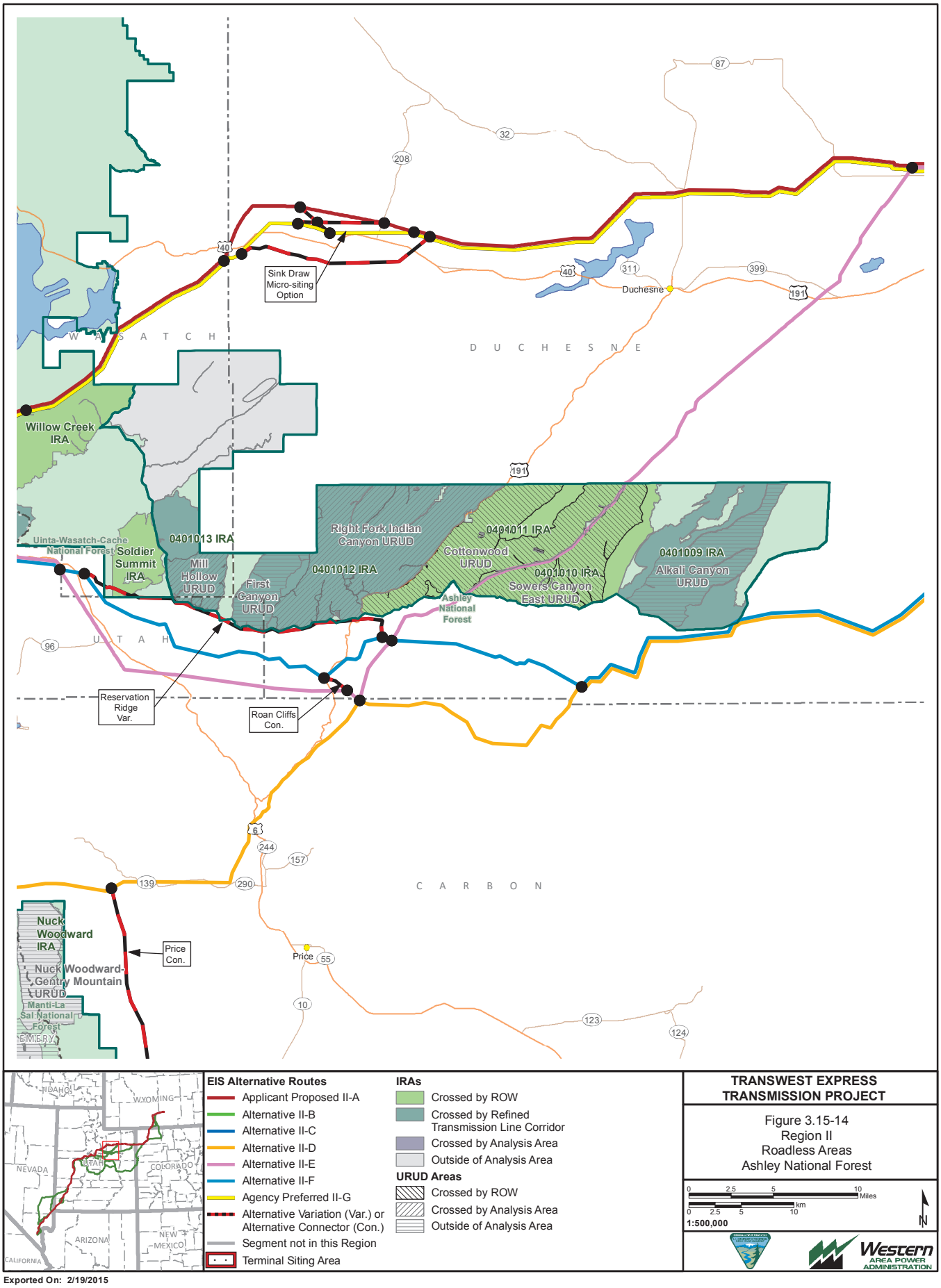
National Forest	IRA/URUD Area[1]	Acres IRA / URUD
Ashley (Region II)	IRA 0401009	30,356
	IRA 0401010 / Sowers Canyon East URUD Area	21,869 / 17,028
	IRA 0401011 / Cottonwood Canyon URUD Area	30,039 / 25,989
	IRA 401012 / Right Fork Indian Canyon URUD Area	46,363 / 6,725
	IRA 401013 / Mill Hollow URUD Area	11,900 / 6,128
Fishlake (Region II)	Browns Hole URUD Area	8,212
Manita-La Sal (Region II)	Boulger-Black Canyon IRA	23,266
	Cedar Knoll IRA / URUD Area	22,485 / 28,351
	East Mountain IRA	30,577
Uinta[2] (Region II)	IRA 418008 (Chipman Creek)	9,360
	IRA 418019 (Soldier Summit)	6,849
	IRA 418017 (Tie Fork)	19,615
	IRA 418009 (Willow Creek)	18,049
Dixie (Region III)	Atchinson IRA / URUD Area	17,663 / 24,309
	Cove Mountain IRA / URUD Area	16,639 / 15,678
	Gum Hill IRA	3,182
	Moody Wash IRA / Mogotsu IRA / Moody Wash-Mogotsu URUD Area	31,857 / 16,772 / 58,994
	Pine Valley Mountain URUD Area	154,519
	Kane Mountain URUD Area	9,635

[1] In some cases, the IRA also may overlap with URUD areas that are not included in this analysis because the URUD areas are avoided by the refined transmission corridor. Similarly, there are some cases where an URUD area is crossed by the refined transmission corridor, but the IRA is avoided.

[2] Only lands within the Uinta National Forest Planning Area within the analysis area.

3.15.4.11 Areas of Critical Environmental Concern

ACECs are an administrative designation made by the BLM through a land use plan. FLPMA defines an ACEC as an area "within the public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards."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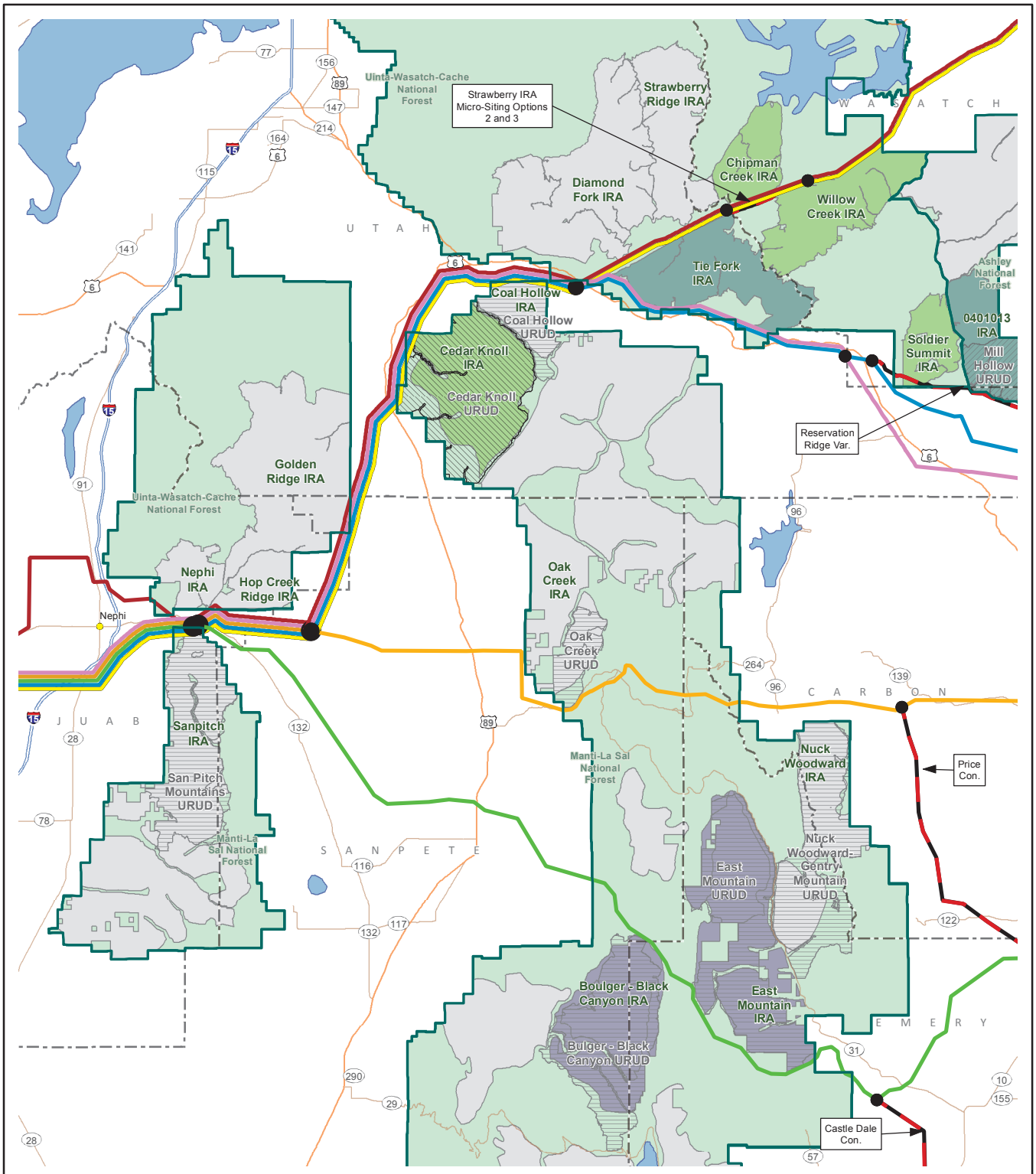
Sink Draw Micro-siting Option
Duchesne
WASATCH
DUCHESNE
Willow Creek IRA
Uinta-Wasatch-Cache National Forest
Soldier Summit IRA
0401013 IRA
Mill Hollow URUD
First Canyon URUD
0401012 IRA
Right Fork Indian Canyon URUD
0401011 IRA
Cottonwood URUD
0401010 IRA Sowers Canyon East URUD
0401009 IRA Alkali Canyon URUD
Ashley National Forest
UTAH
Reservation Ridge Var.
Roan Cliffs Con.
CARBON
Nuck Woodward IRA
Nuck Woodward-Gentry Mountain URUD
Manti-La Sal National Forest
EMERY
Price Con.
Price
EIS Alternative Routes
Applicant Proposed II-A
Alternative II-B
Alternative II-C
Alternative II-D
Alternative II-E
Alternative II-F
Agency Preferred II-G
Alternative Variation (Var.) or Alternative Connector (Con.)
Segment not in this Region
Terminal Siting Area
IRAs
Crossed by ROW
Crossed by Refined Transmission Line Corridor
Crossed by Analysis Area
Outside of Analysis Area
URUD Areas
Crossed by ROW
Crossed by Analysis Area
Outside of Analysis Area
TRANSWEST EXPRESS TRANSMISSION PROJECT
Figure 3.15-14
Region II
Roadless Areas
Ashley National Forest
0 2.5 5 10 Miles
0 2.5 5 10 km
1:500,000
N
Western AREA POWER ADMINISTRATION
Exported On: 2/19/2015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Uinta-Wasatch-Cache National Forest
Strawberry IRA Micro-Siting Options 2 and 3
Strawberry Ridge IRA
Diamond Fork IRA
Chipman Creek IRA
Willow Creek IRA
Tie Fork IRA
Coal Hollow IRA
Coal Hollow URUD
Cedar Knoll IRA
Cedar Knoll URUD
Ashley National Forest
0401013 IRA
Soldier Summit IRA
Mill Hollow URUD
Reservation Ridge Var.
Golden Ridge IRA
Nephi IRA
Hop Creek Ridge IRA
Nephi
Oak Creek IRA
Oak Creek URUD
Sanpitch IRA
San Pitch Mountains URUD
Manti-La Sal National Forest
Nuck Woodward IRA
Price Con.
East Mountain URUD
Nuck Woodward-Gentry Mountain URUD
Boulger - Black Canyon IRA
Boulger - Black Canyon URUD
East Mountain IRA
Castle Dale Con.
UTAH
SANPETE
CARBON
EMERY
WASATCH
JUAB
EIS Alternative Routes
Applicant Proposed II-A
Alternative II-B
Alternative II-C
Alternative II-D
Alternative II-E
Alternative II-F
Agency Preferred II-G
Alternative Variation (Var.) or Alternative Connector (Con.)
Segment not in this Region
IRAs
Crossed by ROW
Crossed by Refined Transmission Line Corridor
Crossed by Analysis Area
Outside of Analysis Area
URUD Areas
Crossed by ROW
Crossed by Analysis Area
Outside of Analysis Area
TRANSWEST EXPRESS TRANSMISSION PROJECT
Figure 3.15-15
Region II
Roadless Areas
Uinta-Wasatch-Cache and Manti-La Sal National Forests
0 2.5 5 10 Miles
0 2.5 5 10 km
1:500,000
N
Western AREA POWER ADMINISTRATION
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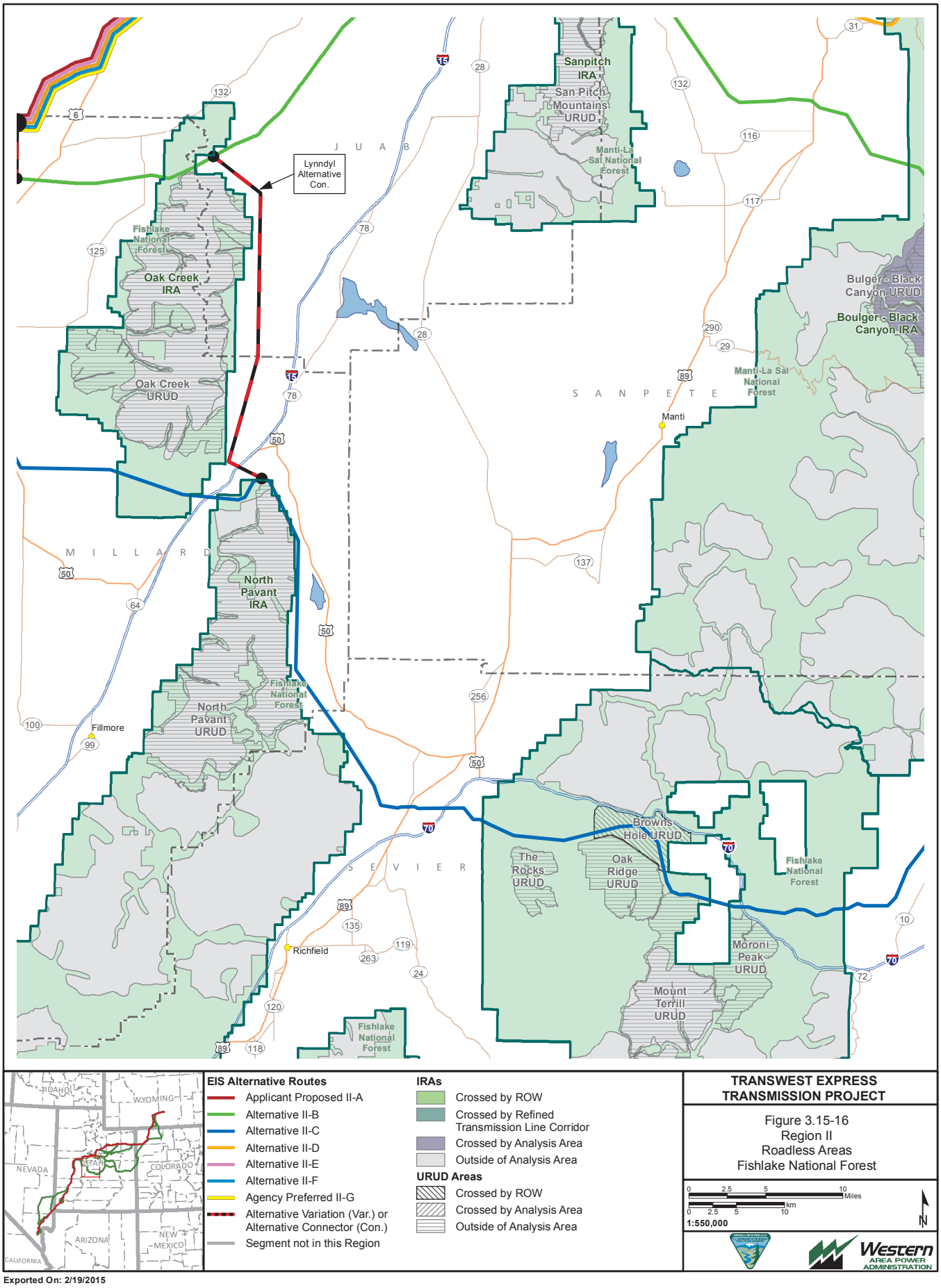
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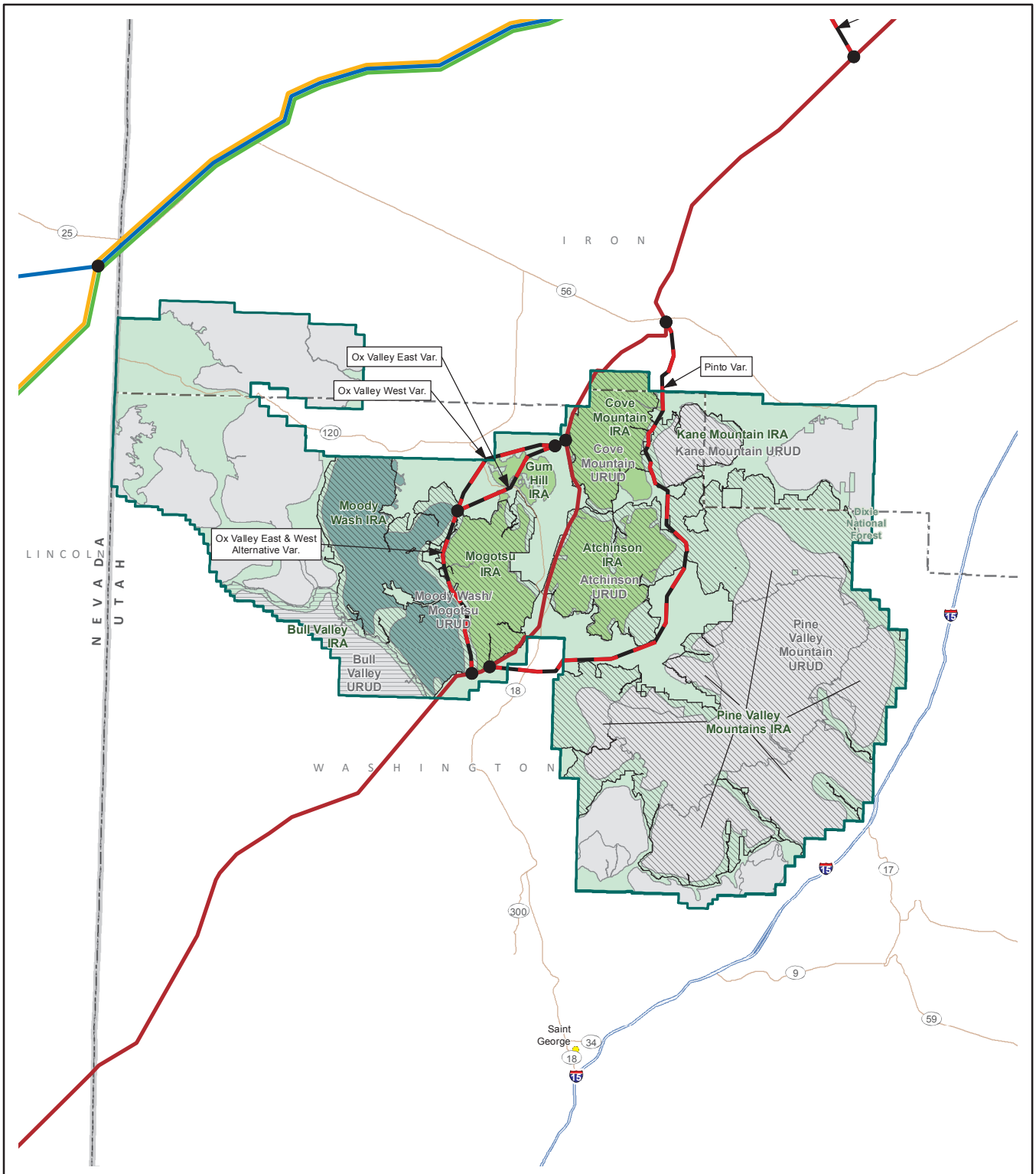
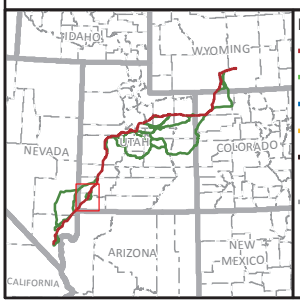
Sanpitch IRA
San Pitch Mountains URUD
Manti-La Sal National Forest
Lyndyl Alternative Con.
Fishlake National Forest
Oak Creek IRA
Oak Creek URUD
Bulger - Black Canyon URUD
Boulger - Black Canyon IRA
Manti-La Sal National Forest
Manti
North Pavant IRA
Fishlake National Forest
North Pavant URUD
Fillmore
Browns Hole URUD
The Rocks URUD
Oak Ridge URUD
Fishlake National Forest
Moroni Peak URUD
Mount Terrill URUD
Richfield
Fishlake National Forest
J U A B
M I L L A R D
S A N P E T E
S E V I E R
IDAHO
WYOMING
NEVADA
UTAH
COLORADO
ARIZONA
NEW MEXICO
CALIFORNIA
EIS Alternative Routes
Applicant Proposed II-A
Alternative II-B
Alternative II-C
Alternative II-D
Alternative II-E
Alternative II-F
Agency Preferred II-G
Alternative Variation (Var.) or Alternative Connector (Con.)
Segment not in this Region
IRAs
Crossed by ROW
Crossed by Refined Transmission Line Corridor
Crossed by Analysis Area
Outside of Analysis Area
URUD Areas
Crossed by ROW
Crossed by Analysis Area
Outside of Analysis Area
TRANSWEST EXPRESS TRANSMISSION PROJECT
Figure 3.15-16
Region II
Roadless Areas
Fishlake National Forest
0 2.5 5 10 Miles
0 2.5 5 10 km
1:550,000
N
Western AREA POWER ADMINISTRATION
Exported On: 2/19/2015





EIS Alternative Routes
- Applicant Proposed III-A
- Alternative III-B
- Alternative III-C
- Agency Preferred III-D
- Alternative Variation (Var.) or Alternative Connector (Con.)
- Segment not in this Region

IRAs
- Crossed by ROW
- Crossed by Refined Transmission Line Corridor
- Crossed by Analysis Area
- Outside of Analysis Area

URUD Areas
- Crossed by ROW
- Crossed by Analysis Area
- Outside of Analysis Area

TRANSWEST EXPRESS TRANSMISSION PROJECT

Figure 3.15-17
Region III
Roadless Areas
Dixie National Forest

0 2.5 5 10 Miles
0 2.5 5 10 km
1:500,000

N

Western AREA POWER ADMINISTRATION

Exported On: 2/19/2015

To be designated as an ACEC, the area must meet the criteria of relevance and importance (as defined in BLM Manual 1613). An area meets the relevance criteria if it contains one or more of the following:

- A significant historic, cultural, or scenic value (including but not limited to rare or sensitive archeological resources and religious or cultural resources important to Native Americans).

A fish and wildlife resource (including but not limited to habitat for endangered, sensitive, or threatened species, or habitat essential for maintaining species diversity).

- A natural process or system (including but not limited to endangered, sensitive, or threatened plant species; rare, endemic, or relic plants or plant communities which are terrestrial, aquatic, or riparian; or rare geological features).
- Natural hazards (including but not limited to areas of avalanche, dangerous flooding, landslides, unstable soils, seismic activity, or dangerous cliffs). A hazard caused by human action may meet the relevance criteria if it is determined through the RMP process that it has become part of a natural process.

The value, resource, system, process, or hazard described in the relevance section must have substantial significance and values to meet the importance criteria. This generally means that the value, resource, system, process, or hazard is characterized by one or more of the following:

- Has qualities that are more than locally significant, giving it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource.
- Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change.
- Is recognized as warranting protection to satisfy national priority concerns or to carry out the mandates of FLPMA.
- Has qualities that warrant highlighting to satisfy public or management concerns about safety and public welfare.
- Poses a significant threat to human life and safety or to property.

Private lands and lands administered by other agencies may be located within the boundaries of ACECs, but are not subject to the prescribed management of the ACEC.

Sixteen ACECs have been designated on BLM-administered lands located within the analysis area. The applicable RMPs for each BLM FO identify the specific conditions and/or restrictions imposed within each of the ACECs. The ACECs located within the analysis area are tabulated in **Table 3.15-5** and shown in **Figures 3.15-1** through **3.15-4**.

3.15.4.12 Other Special Designation Areas

State Wildlife Management Areas

The analysis area contains Wyoming WHMAs, Colorado state wildlife areas, hunting leases, and Utah WMAs. These WMAs have been established to preserve fish and wildlife habitat and to provide recreational opportunities including fishing, hunting, and wildlife viewing. Impacts to these areas are discussed in detail in Section 3.13, Recreation Resources.

Other Recreation Areas

State recreation use areas, BLM SRMAs, and BLM or USFS developed recreation facilities are located within the analysis area. These areas have been established to provide recreational opportunities

including OHV uses, boating, and various types of non-motorized recreation. Impacts to these areas are discussed in detail in Section 3.13, Recreation Resources.

Table 3.15-5 Areas of Critical Environmental Concern within the Analysis Area

BLM FO	ACEC	Relevance and Importance Values and Management Prescriptions[1]
Region I		
There are no ACECs in the analysis area.		
Region II		
BLM White River FO, Colorado	Oil Spring Mountain WSA/ACEC (18,260 acres)	Designated for spruce-fir and biologically diverse plant communities, BLM sensitive species, and remnant vegetation associations. WSA is a ROW exclusion area but not recommended to be carried forward as wilderness. The proposed ACEC would be managed as a ROW avoidance area. The boundaries of the ACEC and WSA overlap, however, the ACEC boundary is slightly larger and includes the WSA boundary road.
	White River Riparian ACEC (950 acres)	Designated for important biologically diverse plant communities, bald eagle roosts, Federally listed Colorado pikeminnow below Taylor Draw Dam. ROW avoidance area; surface disturbance contingent upon avoidance of cottonwood communities, maintenance of utility as bald eagle habitat and properly functioning riparian community, and use of special reclamation techniques to accelerate recovery and reestablishment of habitat.
BLM Grand Junction FO, Colorado	Badger Wash ACEC (1,520 acres)	Designated for sensitive plants; is a 680-acre hydrologic research area designed to study the effects of surface-disturbing activities on sediment yield; is designated as unsuitable for public utilities.
BLM Vernal FO, Utah[2]	Lears Canyon ACEC (1,375 acres)	Contains a natural system, specifically relict plant and Douglas fir-pinyon-juniper vegetation communities, serves as a scientific reference area. NSO for oil and gas development (ROW avoidance area); closed to motorized travel; managed as VRM Class II.
	Nine Mile Canyon ACEC (44,168 acres)	Nationally significant Fremont, Ute, archaic rock art and structures, and special status plant habitat. Managed as NSO for oil and gas development (ROW avoidance area); managed as VRM Class II within the canyon.
	Lower Green River Corridor ACEC (8,470 acres)	Significant riparian habitat and outstanding (Class A) scenic values; provides critical habitat for 4 special status fish species, 10 special status wildlife species, and 10 special status plant species. The lower segment of the Green River has scenic qualities and undeveloped natural areas producing high quality recreation opportunities, as well as rare and fragile archaeological sites. NSO within line of sight or up to 0.5 mile from the centerline of the river, whichever is less. OHV use limited to designated routes, managed as VRM Class II. There is a designated utility corridor within the ACEC; however, the corridor is not excluded from the mapped ACEC management requirements.
BLM Price FO, Utah	Rock Art ACEC (contains 13 units, 5,300 acres total)	Some of the best examples of prehistoric rock art in the Colorado Plateau. ROW exclusion area; NSO for oil and gas development; excluded from land treatments and range improvements except for watershed control structures to protect cultural resource values; OHV limited to designated roads and trails.
	San Rafael Canyon ACEC (15,200 acres)	Designated for scenic values. The San Rafael River has cut a channel creating what is known as the “Little Grand Canyon” as viewed from the Wedge. The Black Boxes are world renowned. ROW avoidance area; NSO for oil and gas; VRM Class II; excluded from land treatments and range improvements unless used to protect or improve riparian values; OHV limited to designated roads and trails.
Region III		
BLM St. George FO, Utah	Beaver Dam Slope ACEC (48,519 acres)	Designated for desert tortoise habitat; also contains habitat for a diversity of desert plant and animal species, many of which are listed by state or federal agencies as special status species. Included in the area are the Joshua Tree National Natural Landmark and the Woodbury Desert Study Area. The Study Area has been the focus of desert wildlife and ecosystem research since the 1930s. Values within the ACEC are at risk from increasing levels of human encroachment, off-road travel, and various forms of outdoor recreation. The area is designated as a ROW avoidance area except in designated utility and transportation corridors.

Table 3.15-5 Areas of Critical Environmental Concern within the Analysis Area

BLM FO	ACEC	Relevance and Importance Values and Management Prescriptions[1]
BLM Caliente FO, Nevada	Beaver Dam Slope ACEC (36,800 acres)	Critical desert tortoise habitat; managed primarily for recovery of the species including such actions as closure or major restrictions on mineral development, removal of livestock grazing, OHV use limited to designated roads and trails, limiting authorization of new ROWs, limitation of fire management activities, and prohibition of land disposals. Contains sensitive plant species populations. The area is an avoidance area for ROWs; use of existing corridors is encouraged for all future ROWs when possible. RMP specifies that ROWs in desert tortoise habitat shall be managed the same as the surrounding ACEC.
	Mormon Mesa – Ely ACEC (109,680 acres within CFO)	Designated for critical desert tortoise habitat; also contains sensitive plant species populations. Management prescriptions include such actions as closure or major restrictions on mineral development, removal of livestock grazing, limitation on OHV use to designated roads and trails, limitation of fire management activities, and prohibition of land disposals. ROW limited to use of existing corridors and the ACEC contains both ROW avoidance and exclusion areas.
BLM Las Vegas FO, Nevada	Mormon Mesa ACEC (151,360 acres within LVFO)	Designated for critical desert tortoise habitat. Management as ROW avoidance area except within existing corridors; requires reclamation of temporary roads. OHV use is limited to designated roads and trails.
	Coyote Springs Valley ACEC (75,500 acres)	Designated for critical desert tortoise habitat. ROW avoidance area except within existing corridors. Closed to locatable mineral and solid leasables, livestock grazing and commercial collection of flora. OHV use is limited to designated roads and trails.
Region IV		
BLM Las Vegas FO, Nevada	Rainbow Gardens ACEC (37, 620 acres)	Geological, scientific, scenic, and sensitive plant values throughout the ACEC; cultural values on 320 acres. The ACEC contains sensitive soil "badland" areas as well as the Great Unconformity, a location where there are missing intervals of the geologic record. ROW avoidance area except within corridors; reclamation of temporary roads is required. OHV use limited to designated roads and trails.
	River Mountains ACEC (5,617 acres)	Bighorn sheep habitat; scenic viewshed for Henderson and Boulder City. ROW avoidance area except within corridors; reclamation of temporary roads is required. OHV use is limited to existing roads and trails.

[1] BLM VRM classes are described in more detail in Section 3.12, Visual Resources.

[2] Per the 2008 RMP, within the BLM Vernal FO, ROW exclusion and avoidance areas are consistent with areas closed to oil and gas leasing or with a NSO stipulation, respectively.

Note: See Introduction to Section 3.15.4 for an explanation of how the combination of impact indicators describes the SDA location in relation to the alignment, 250-foot-wide transmission line ROW, refined transmission corridor, and area outside of the refined transmission corridor in which roads or construction support areas may be located. For more information about disturbance modeling, please see Section 3.1.

Sources: BLM 2008a,d,f, 1999, 1998, 1997b, 1987.

3.15.5 Regional Summary

The following sections provide a summary of the SDAs that are within the analysis area for each region, as depicted in **Figures 3.15-1** through **3.15-8**.

3.15.5.1 Region I

The Region I analysis area contains four SDAs: three NHST trails in Wyoming and one national monument in Colorado. The general locations of Region I SDAs are depicted in **Figure 3.15-1** and **Figure 3.15-5**, and includes the following:

- CDNST/ CDNST SRMA (Wyoming, BLM Rawlins FO)
- Overland Historic Trail (Wyoming, BLM Rawlins FO)
- Cherokee Historic Trail (Wyoming, BLM Rawlins FO)
- Dinosaur National Monument (Colorado, NPS)

Section 3.15.4.8 (Designated National Trails) discusses the regulatory framework, resource values, and current conditions of the CDNST and the Overland and Cherokee Trails. **Figure 2.15-9** depicts the CDNST. **Figure 3.15-10** depicts the Overland and Cherokee Trails. The regulatory framework and current conditions of the Dinosaur National Monument is discussed in Section 3.15.4.2 (National Monuments).

Scenic Byways/Backways are discussed in Section 3.12, Visual Resources, and Section 3.13, Recreation Resources.

3.15.5.2 Region II

The Region II analysis area contains 26 SDAs: 1 NCA in Colorado, 2 WSAs in Colorado, 7 ACECs in Utah and Colorado, 1 national monument in Utah, 13 IRA/URUD areas in Utah, and 1 NHT in Utah. The general locations of Region II SDAs are depicted in **Figure 3.15-2** and **Figure 3.15-6**, and includes the following:

- Oil Spring Mountain WSA and ACEC (Colorado, BLM White River FO)
- White River Riparian ACEC (Colorado, BLM White River FO)
- McInnis Canyons NCA (Colorado, BLM Grand Junction FO)
- Badger Wash ACEC (Colorado, BLM Grand Junction FO)
- Demaree WSA (Colorado, BLM Grand Junction FO)
- Dinosaur National Monument (Utah, NPS)
- Lower Green River Corridor ACEC (Utah, BLM Vernal FO)
- Lower Green River WSR (Utah, BLM Vernal FO)
- Lears Canyon ACEC (Utah, BLM Vernal FO)
- Nine Mile Canyon ACEC (Utah, BLM Vernal FO)
- San Rafael Canyon ACEC (Utah, BLM Price FO)
- Rock Art ACEC (Utah, BLM Price FO)
- IRA 401009 (Utah, USFS Ashley National Forest)
- IRA 401010 / Sowers Canyon East URUD Area (Utah, USFS Ashley National Forest)
- IRA 401011 / Cottonwood Canyon URUD Area (Utah, USFS Ashley National Forest)
- IRA 401012 / Right Fork Indian Canyon URUD Area (Utah, USFS Ashley National Forest)
- IRA 401013 / Mill Hollow URUD Area (Utah, USFS Ashley National Forest)
- IRA 418008 – Chipman Creek (Utah, USFS Uinta National Forest Planning Area)
- IRA 418017 – Tie Fork (Utah, USFS Uinta National Forest Planning Area)
- IRA 418009 – Willow Creek (Utah, USFS Uinta National Forest Planning Area)
- IRA 418019 – Soldier Summit (Utah, USFS Uinta National Forest Planning Area)
- Cedar Knoll IRA / URUD Area (Utah, USFS Manti-LaSal National Forest)
- Boulger–Black Canyon IRA (Utah, USFS Manti-LaSal National Forest)
- East Mountain IRA (Utah, USFS Manti-LaSal National Forest)
- Browns Hole URUD Area (Utah, USFS Fishlake National Forest)
- Old Spanish NHT (Utah, BLM Moab and Price FOs)

The regulatory framework, unique resource values, and current conditions of these SDAs are discussed in the following sections: Section 3.15.4.2 (National Monuments), Section 3.15.4.4 (WSAs), Section 3.15.4.5 (WSRs), Section 3.15.4.6 (NCAs), Section 3.15.4.8 (Designated National Trails), Section 3.5.4.10 (Designated Roadless Areas and Unroaded/Undeveloped Areas) and Section 3.15.4.11 (ACECs).

Figure 2.15-11 depicts the segments of the Old Spanish NHT that are within the Region II analysis area. Region II IRAs and URUD areas are depicted in **Figures 3.15-14** through **3.15-15.**

Scenic Byways/Backways are discussed in Section 3.12, Visual Resources, and Section 3.13, Recreation Resources.

3.15.5.3 Region III

The Region III analysis area contains 24 SDAs: 7 IRA/URUD areas in Utah, 1 NCA in Utah, 4 ACECs in Utah and Nevada, 2 NWRs in Nevada, 5 proposed wilderness areas in Nevada, 2 wilderness areas in Nevada, 2 WSRs in Nevada, and 1 NHT in Utah and Nevada. The general locations of Region III SDAs are depicted in **Figure 3.15-3** and **Figure 3.15-7**, and includes the following:

- Beaver Dam Wash NCA (Utah, BLM St. George FO)
- Beaver Dam Slope ACEC (Utah, BLM St. George FO)
- Beaver Dam Slope ACEC (Nevada, BLM Caliente FO)
- Mormon Mesa-Ely ACEC (Nevada, BLM Caliente FO)
- Mormon Mesa ACEC (Nevada, BLM Las Vegas FO)
- Clover Mountains Wilderness Area (Nevada, BLM Caliente FO)
- Delamar Mountains Wilderness Area (Nevada, BLM Caliente FO)
- Coyote Springs Valley ACEC (Nevada, BLM Las Vegas FO)
- Muddy River WSR (Nevada, BLM Las Vegas FO)
- Meadow Valley Wash WSR (Nevada, BLM Las Vegas FO)
- Atchinson IRA / URUD Area (Utah, USFS Dixie National Forest)
- Cove Mountain IRA / URUD Area (Utah, USFS Dixie National Forest)
- Gum Hill IRA (Utah, USFS Dixie National Forest)
- Moody Wash IRA / Mogotsu IRA / Moody Wash-Mogotsu URUD Area (Utah, USFS Dixie National Forest)
- Pine Valley Mountain URUD Area (Utah, USFS Dixie National Forest)
- Kane Mountain URUD Area (Utah, USFS Dixie National Forest)
- Desert NWR (Nevada, USFWS)
- Pahranagat NWR (Nevada, USFWS)
- Old Spanish NHT (Utah, BLM Cedar City and St. George FOs; Nevada, BLM Caliente and Las Vegas FOs)
- USFWS Proposed Wilderness #1 (Nevada, USFWS)
- USFWS Proposed Wilderness #2 (Nevada, USFWS)

- USFWS Proposed Wilderness #3 (Nevada, USFWS)
- USFWS Unit 2 Las Vegas Range Proposed Wilderness (Nevada, USFWS)
- USFWS Unit 3 Sheep Range Proposed Wilderness (Nevada, USFWS)

The regulatory framework, unique resource values, and current conditions of these SDAs are discussed in the following sections: Section 3.15.4.4 (Wilderness Areas and proposed wilderness), Section 3.15.4.5 (WSRs), Section 3.15.4.6 (NCAs), Section 3.15.4.8 (Designated National Trails), Section 3.5.4.10 (Designated Roadless Areas and Unroaded/Undeveloped Areas), and Section 3.15.4.11 (ACECs).

Figure 2.15-12 depicts the segments of the Old Spanish NHT that are within the Region III analysis area. Region III IRAs and URUD areas are depicted in **Figures 3.15-17**.

The Mountain Meadows NHL is discussed in detail in Section 3.11, Cultural Resources and Native American Concerns; Section 3.12, Visual Resources; and Section 3.13, Recreation Resources. Scenic Byways/Backways are discussed in Section 3.12, Visual Resources, and Section 3.13, Recreation Resources.

3.15.5.4 Region IV

The Region IV analysis area contains five SDAs all in Nevada: two ACECs, one NCA, one NRA, and one NHT. The general locations of Region IV SDAs are depicted in **Figure 3.15-4** and **Figure 3.15-8**, and includes the following:

- Sloan Canyon NCA (Nevada, BLM Las Vegas FO)
- Rainbow Gardens ACEC (Nevada, BLM Las Vegas FO)
- River Mountains ACEC (Nevada, BLM Las Vegas FO)
- Lake Mead NRA (Nevada, NPS)
- Old Spanish NHT (Nevada, BLM Las Vegas FO)

The regulatory framework, unique resource values, and current conditions of these SDAs are discussed in the following sections: Section 3.15.4.3 (NRAs), Section 3.15.4.6 (NCAs), Section 3.15.4.8 (Designated National Trails), and Section 3.15.4.11 (ACECs). Figure 2.15-13 depicts the segments of the Old Spanish NHT that are within the Region IV analysis area. National Recreation Trails and Scenic Byways/ Backways are discussed in Section 3.12, Visual Resources, and Section 3.13, Recreation Resources.

3.15.6 Impacts to Special Designations

This analysis identifies the impacts to SDAs that would occur from the construction, operation, and decommissioning of the proposed Project. The analysis focuses on the alternative transmission line routes within each Project region and associated alternative variations and connectors, the north and south terminal areas, and ancillary facilities described in detail in Section 2.4 (Elements Common to All Action Alternatives), Section 2.5 (Alternative Transmission Line Routes and Ancillary Facilities), and **Appendix D** (Final EIS Plan of Development).

The assessment of impacts to SDAs is based on the interests and land management objectives of local and federal landowners and management agencies as well as public concerns as identified through public scoping. Impact assessment generally focuses on conformance with the management objectives for the area and impacts to the resource values for which the SDA was designated (for example, the relevant and important values of an ACEC, the roadless characteristics of an IRA, or the wilderness attributes of a wilderness area or URUD area).

For impacts from the Northern and Southern terminals, the analysis considers a 1-mile area surrounding the terminal footprint. For transmission line impacts, the analysis considers a refined transmission corridor, which includes the transmission alignment and 250-foot-wide transmission line ROW. For impacts from access roads, staging areas, and fly yards, the analysis also considers an area beyond the refined transmission corridor in which temporary construction support areas and/or and permanent roads may be constructed. This area generally extends about 1 mile on each side of the alignment, but it has been reduced in some areas to avoid SDAs. Quantification of impacts to SDAs is based upon the following:

- Miles of the preliminary engineered alignment that are within the SDA;
- Acres of 250-foot-wide transmission line ROW as currently mapped, which may include portions of the SDA not currently affected by the alignment;
- Modeled acres of ROW vegetation clearing that may occur within the refined transmission corridor, which may include portions of the SDA not currently affected by the alignment; and
- Acres of potential construction and operation disturbance within the SDA, which accounts for areas beyond the refined transmission corridor where some temporary construction facilities and temporary and permanent access roads may be located.

The impact assessment tables contained in Sections 3.15.4.3 to 3.15.4.6 identify these impact indicators for each SDA within the area of potential impact. TransWest's Design Features and BMPs include measures to reduce some of the impacts that may affect SDAs These include measures to minimize vegetation removal, avoid root damage, reduce sedimentation and erosion, manage noxious or invasive weeds, and consolidate access roads, support areas, and other infrastructure. The following mitigation measures are proposed to further reduce impacts to SDAs. The regional analyses contain, by SDA, a listing of the mitigation measures proposed for each SDA and their effectiveness in reducing impacts.

SDA-1: *Within SDAs, access shall be limited to existing roads whenever practicable, and construction staging areas/fly yards, material storage yards and batch plant sites shall not be placed in SDAs. ROWs that currently are not sited within SDAs shall not be placed within the SDA during subsequent micro-siting efforts associated with development of the POD.*

SDA-2: *If new or improved access roads cannot be avoided within SDAs, roads shall be closed or rehabilitated through methods developed through consultation with the landowner or land management agency. Methods for closure could include gates, obstructions such as berms or boulders, or partial or full restoration to natural contour or vegetation.*

SDA-3*: If designated corridors exist within the SDA, the transmission alignment, new roads, and ancillary construction areas shall only be located within designated utility corridors.*

SDA-4*: Ground electrode systems shall be sited outside of any designated SDAs located within the ground electrode siting areas.*

SDA-5: *Within all SDAs, Level 3 (Selective ROW Clearance Based) vegetation management methods would be utilized as necessary and as determined by the land management agency to reduce impacts to visual, recreation, wildlife and other resources.*

SDA-6*: During ROW clearing, root-mat and low growing understory would retained to minimize sediment erosion. Construction would span sensitive resources to reduce resource impacts.*

SDA-7*: Overland travel access within IRAs would be developed in collaboration with the USFS responsible official, USFS implementation project lead, and construction contractor. If "drive and crush" methods cannot be used and vegetation removal is required, only small diameter trees would be removed; root-mat and low growing understory would retained.*

***SDA-8**: Construction schedules for work within IRAs would be developed as part of the construction POD and in coordination with USFS officials to minimize resource impacts.*

***SDA-9**: If unauthorized roads or closed roads are used for access into IRAs, the Applicant will work with USFS to ensure that Project use does not further inhibit management of the IRA and that road reclamation activities are coordinated with USFS to return the area to, at a minimum, its pre-Project condition.*

***SDA-10**: There would be at least one preconstruction coordination meeting with USFS responsible official, USFS implementation project lead, and construction contractor to review IRA site-specific construction plans, and one post-construction meeting to review results.*

***SDA-11:** Herbicides use within IRAs would be limited to noxious weed control only and will not be used for general ROW vegetation maintenance.*

***SDA-12**: Roadless construction techniques shall be applied within all portions of URUD areas located outside of IRA, unless the national forests have completed their LRMP revisions and have determined not to manage the area as an IRA or wilderness area.*

***SDA-13**: All proposed SDA mitigations shall be applied to URUD areas.*

***SDA-14:** Placement of any project component within/across river segments that are eligible or suitable for inclusion in the NWSRS shall be micro-sited in coordination with BLM to minimize surface or visual disturbances from towers, roads, or other facilities to the outstandingly remarkable values that led to segment eligibility/suitability. Additionally, the agencies may require compensatory mitigation on a case-by-case basis to offset the effects to the outstandingly remarkable values*

***SDA-15:** Series compensation stations shall not be sited in any SDA.*

Application of **SDA-1** through **SDA-4** are proposed to consolidate and minimize surface disturbances within SDAs from roads, construction sites, and ground electrode systems and to assure that the alignment would not be changed to enter a SDA not currently crossed by the alignment or the refined transmission corridor.

SDA-5 is designed to address impacts from ROW vegetation removal and the concomitant impacts upon wildlife, wildlife habitat, visual, or other sensitive resources within SDAs. Standard vegetation management techniques (as defined in the TransWest Project Vegetation Management Plan Framework, **Appendix D**, Section 3.6.2.2) would result in a corridor of low growth plant communities ranging from 2 to 6 feet in height. This type of vegetation management could result in long term loss of wildlife habitat or habitat fragmentation and would result in visual impacts, particularly in pinyon-juniper, mixed conifer and spruce communities or other vegetation types higher than six feet (Section 3.12, Visual Resources, for more details). Application of the Plan's Level 3 vegetation management would allow increased vegetation heights anywhere within the 250-foot-wide transmission line ROW as along as vegetation does not encroach on the required minimum clearances (about 29 feet). Application of **SDA-5** would allow a greater diversity of vegetation to become reestablished, minimize disturbance to wildlife habitat and the diversity of plants and animals within the SDA, and/or reduce visual impacts.

SDA-6 through **SDA-11** pertain only to USFS IRAs and are proposed to reduce impacts to wilderness characteristics of these areas and ensure compliance with the Roadless Rule. **SDA-6, SDA-7**, and **SDA-8** would reduce the amount and type of initial vegetation removal /disturbance and protect the area's natural integrity to the maximum amount possible. **SDA-9** and **SDA-10** would provide a process for developing site-specific plans and ensuring appropriate reclamation has taken place. **SDA-11** would

ensure that chemical agents used for noxious weed control t would not be used for ongoing ROW vegetation maintenance.

SDA-12 and **SDA-13** pertain only to USFS URUD areas. Unlike IRAs, there is no specific management restriction precluding road development in URUD areas outside of IRAs, provided the appropriate Standard and Guidelines are met. Application of **SDA-12** and **SDA-13** are proposed to provide resource protections to these areas until the USFS has completed their IRA/wilderness designations.

SDA-14 pertains only to eligible or suitable wild and scenic river segments and is designed to minimize impacts to those segments from placement of transmission line components adjacent, but not within, this type of SDA.

SDA-15 pertains to Design Options 2 and 3, which would require construction of a series compensation station between the IPP station near Delta, Utah and the transmission line terminus for Design Option 2 or between Rawlins, Wyoming and IPP station near Delta, Utah for Design Option 3, in locations yet to be determined. Application of **SDA-15** would eliminate any potential for station construction within SDAs.

At the end of the Project's 50-year ROW grant, or when it is determined that the Project is no longer economical, the Project would be decommissioned and the area reclaimed. Impacts from decommissioning of the Project are expected to be very similar to the effects from construction activities as discussed in the following sections. Upon decommissioning, land use impacts from construction and operation of the Project would generally be reversible with successful vegetation reclamation.

Section 3.11, Cultural Resources, contains additional mitigation to protect NHTs. **CUL-1** proposes on-site and off-site mitigation to compensate specifically for cumulative impacts, as well as direct and indirect adverse effects to the Old Spanish NHT in Nevada, **CUL-4** proposes on-site and off-site mitigation to compensate specifically for cumulative impacts, as well as direct and indirect adverse effects to the Old Spanish NHT in Wyoming, Colorado, Utah and Nevada. Mitigation may include development of interpretive material; signage and protection for the trail; and development of education materials. Future discussion with consulting parties as part of the PA process would provide further mitigation guidance. The PA process is dicussed in greater detail in Section 3.11. Although these compensatory mitigations would not reduce the level of direct impact the Project might have to the cultural resources, they would offset the impacts through the improvement of other on- and off-site resources.

3.15.6.1 Impacts from Terminal Construction, Operation, and Decommissioning

This section discloses impacts to land uses that would occur from construction and operation of the Northern and Southern terminals, which are common to all action alternatives.

Northern Terminal

The Northern Terminal site would be on private lands in Carbon County, Wyoming, approximately 2.5 miles southwest of the Town of Sinclair, Wyoming. The Northern Terminal facilities would occupy 234 acres of private lands (see **Figure 2-16**).

The Northern Terminal would not disturb any lands within any SDAs. There would be no conflicts with state or federally established, designated or reasonably foreseeable planned SDAs because none exist in or near the Northern Terminal.

Southern Terminal

The Southern Terminal facilities would be located in the Eldorado Valley, approximately 15 miles southwest of Boulder City, in Clark County, Nevada. Within the Southern Terminal siting area, there are two potential siting locations for the Southern Terminal. Both sites initially would occupy approximately 415 acres and would be located entirely on lands that have been annexed by Boulder City (see

Figure 2-17). Neither site would be located within any SDAs. However, both sites are adjacent to the Sloan Canyon NCA. The 48,000-acre NCA is managed to conserve, protect, and enhance the cultural, archaeological, natural, wilderness, scientific, geological, historical, biological, wildlife, educational, and scenic resources of this area. The portion of the NCA closest to the Southern Terminal is managed as a semi-primitive, non-motorized area allowing camping, hiking, and equestrian use and is classified as VRM Class II.

During construction, the quality of the uses in portions of the NCA closest to the alternate southern terminal site (which is about 0.3 mile from the NCA) could be temporarily reduced from construction noise and activity. Visual impacts during operations would be consistent with existing uses (Section 3.12, Visual Resources, for a discussion of visual impacts and mitigation measures). Application of **SDA-1** would eliminate surface disturbance impacts from alternate southern terminal within the NCA, but noise impacts would remain.

The Southern Terminal location would be about 1 mile from the NCA. Construction at this location would not include any surface disturbance within the NCA, and impacts to the NCA from construction noise and activity would be reduced to background levels through noise attenuation.

Impacts from decommissioning at either site would be similar to those discussed under construction.

Southern Terminal, Design Option 2

Under Design Option 2, the Southern Terminal would be located near the IPP in Millard County, Utah, instead of at the Marketplace in Nevada. Design Option 2 would have no new or additional effects to SDAs because there are no SDAs within the relocated Southern Terminal. The Marketplace Southern Terminal location would become a substation, with effects similar to those described above.

3.15.6.2 Impacts Common to All Alternative Routes and Associated Facilities

Impacts to SDAs in the four Project regions may occur during construction, operation, maintenance, and decommissioning of the transmission line and associated temporary and permanent facilities associated with the alternative routes, alternative variations, and alternative connectors.

Specific impacts to SDAs depend on the values for which each SDA was designated; therefore, each SDA is discussed separately in the regional analyses contained in Sections 3.15.4.3 through 3.15.4.6. In general, the construction impacts to SDAs result from ROW vegetation removal; surface disturbance from tower, road and support area construction; noise impacts to wildlife and/or visitors; and in the case of SDAs for which scenic quality is important, visual impacts from the construction activities. Operational impacts to SDAs result from the permanent placement of the transmission alignment, ROW vegetation management, and in the case of SDAs for which visual quality is important, the extent of the Project viewshed.

To reduce impacts from the Project on SDAs, TransWest has committed to comply with all agency stipulations (**Appendix C**, TWE-1). These include timing restrictions for wildlife or surface disturbance buffers for sensitive resources. TransWest would span sensitive resources (such as threatened and endangered habitat, cultural resources, wetlands, etc.) and use selective vegetation removal whenever possible to reduce resource impacts. Special IRA construction techniques would be employed as described in **Appendix D** and would not require the establishment of roads within these areas. TransWest's Design Features and BMPs also include measures to reduce sedimentation and erosion, manage noxious or invasive weeds, and reclaim disturbed areas. ROW vegetation would be reestablished in accordance with agency seed mix requirements and in accordance with TransWest's vegetation management practices. Reclamation areas would be monitored for 3 to 5 years in accordance with agency requirements (see **Appendix D**).

Mitigation measures proposed to further reduce impacts to SDAs from the alternative routes, alternative variations, and alternative connectors are identified in the introduction to Section 3.15.4. Residual effects after mitigation is applied are disclosed as part of the individual SDA analyses contained in Sections 3.15.4.3 through 3.15.4.6.

Design Option 2

Under Design Option 2, the alternative routes would be the same, but the transmission line would be AC from the IPP station near Delta, Utah (the end point of Region II), to the Eldorado Valley, south of Boulder City, Nevada (end point of Region IV). A double circuit 345-kV transmission line less than 5 miles in length would be required for interconnection at IPP. If Design Option 2 were implemented, a series compensation station would be necessary along the AC-configured alternative routes of Region III (see **Figure 2-2**). Impacts to SDAs from the alternative routes would be the same as those described for the Proposed Action and alternatives routes, except that during operation, noise levels from the AC line would be higher and there is potential for induced current (Section 3.18, Public Health and Safety). These changes are not anticipated to affect SDA management. There are no SDAs within the proposed location for the 345-kV transmission line. Impacts from the potential series compensation station locations are discussed in Section 3.15.4.4 (Region III).

Design Option 3

Under Design Option 3, the alternative routes would be the same, but a substation would be constructed on BLM lands directly adjacent to the IPP within Millard County, Utah, and a series compensation station would be necessary along the alternative routes of Region II during the first-phase (AC operation; see (see **Figure 2-3**). Design Option 3 also would involve phased construction. Impacts from the substation and phased construction are not anticipated to affect SDA management because there are no SDAs within or near the proposed substation location and phased construction changes would not appreciably change surface disturbance or impacts to resources for which SDAs were designated. Impacts from the series compensation station are discussed Section 3.15.4.3 (Region II).

3.15.6.3 Region I

Table 3.15-6 provides a list of the SDAs in Region I that would be located within the refined transmission corridor, or outside of the refined transmission corridor but within the area in which temporary construction support areas or temporary or permanent roads could be constructed. For more information on the surface disturbance model, please see Section 3.1. These areas also are depicted in **Figures 3.15-1** and **3.15-5**.

Table 3.15-6 Region I: SDAs within Areas of Potential Impact

SDAs	Alternative I-A	Alternative I-B	Alternative I-C	Alternative I-D
CDNST/ CDNST SRMA (BLM Rawlins FO)	**Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)**	**Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)**	**Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)**	**Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)**
	<0.5 / 4 2 / <2 / <1	0.5 / 4 2 / <2 / <1	0.5 / 4 2 / <2 / <1	0.5 / 4 2 / <2 / <1
Overland Historic Trail (BLM Rawlins FO)				
Crossings and segment NRHP eligibility	One non-contributing segment crossed by refined transmission corridor	One non-contributing segment crossed by refined transmission corridor	One contributing segment crossed by refined transmission corridor	One non-contributing segment crossed by refined transmission corridor
Visibility of the alternative from the trail [1]	Visible along 9 miles of trail, 4 of which are contributing	Visible along 9 miles of trail, 4 of which are contributing	Visible along 8 miles of trail, 6 of which are contributing	Visible along 8 miles of trail, 4 of which are contributing
Associated Historic Sites and natural features and nearby recreation or	Duck Lake Station	Duck Lake Station	SH-789 interpretive sign, Washakie Station, Muddy Creek	None

Table 3.15-6 Region I: SDAs within Areas of Potential Impact

SDAs	Alternative I-A	Alternative I-B	Alternative I-C	Alternative I-D
interpretive features				
Management/land use	Private land	Private land	Private land	BLM land, not within designated utility corridor
Cherokee Historic Trail (BLM Rawlins FO)				
Crossings and segment NRHP eligibility	One non-contributing segment crossed by refined transmission corridor	One non-contributing segment crossed by refined transmission corridor	One contributing segment crossed by refined transmission corridor	Three non-contributing segments crossed by refined transmission corridor
Visibility of the alternative from the trail[1]	Visible along 23 miles of trail, 10 of which are contributing	Visible along 27 miles of trail,11 of which are contributing	Visible along 10 miles of trail, 4 of which are contributing	Visible along 29 miles of trail, 11 of which are contributing
Associated Historic Sites and natural features and nearby recreation or interpretive features	None	None	Muddy Creek, Cherokee Creek	None
Management/land use	BLM land, not within designated utility corridor	BLM land, not within designated utility corridor	BLM land, not within designated utility corridor	BLM land, not within designated utility corridor

[1] Visibility of the alternative from the historic trails is based on the 5-mile (either side of the mapped transmission line alignment) viewshed.

Alternative I-A (Applicant Proposed)

Alternative I-A would cross the CDNST and CDNST SRMA and portions of the Overland and Cherokee historic trails. Alternative I-A would not cross any BLM SDAs, IRAs, or URUD areas.

National Scenic Trails

Within the BLM Rawlins FO, Alternative I-A would cross the CDNST and CDNST SRMA, just south of Rawlins, Wyoming, with a designated utility corridor/existing transmission line crossing about 2 miles south of I-80. The NST/SRMA is managed to provide primitive recreational experiences and the scenic trail has national importance. The location of the proposed transmission line would be consistent with CDNST SRMA management because the alignment would be located within the designated utility corridor. The refined transmission corridor (which represents the maximum extent in which ROW shifts could occur and where most roads and construction support areas would be located) and the 250-foot-wide transmission line ROW contain areas both within and outside of the designated utility corridor. Modeled disturbance calculations estimate less than 2 acres of ROW vegetation removal and less than 2 acres of construction surface disturbance, of which a fraction would be permanent. These acreages assume that there is potential for some portions of the tower disturbance, road construction, and/or construction support areas to move outside of the NST/SRMA boundaries as site-specific adjustments are made. If the 250-foot-wide transmission line ROW does not shift, there would be approximately 4 acres subject to ROW vegetation removal and/or surface disturbance. This area would be less than 1 percent of the 600-acre SRMA (which includes 82 miles of trail) and less than 0.1 percent of the entire 3,100-mile CDNST. During construction, noise and activity would temporarily adversely affect the primitive recreation activity for which the trail and SRMA are managed. This would primarily affect the non-mechanized recreation user group (hikers, backpackers, and equestrians). The proposed trail and SRMA crossing would be located adjacent to an existing 230- to 287-kV transmission line and near the I-80 crossing. Towers would be placed to avoid surface disturbance near the actual trail. Visual impacts would be consistent with adjacent structures. Section 3.12, Visual Resources, includes mitigation for areas that are adjacent to existing transmission lines, such as matching tower placement.

Selection of Alternative I-A would be consistent with management of the CDNST SRMA as a ROW avoidance area because the proposed crossing would be in a designated utility corridor, and any existing

recreational experience and character of the trail at this location is already impacted by existing linear structures (a 230- to 287-kV transmission line, a railroad, and the I-80 crossings) and industrial uses. Application of **SDA-1, SDA-2**, and **SDA-3** are proposed to reduce impacts to the CDNST and CDNST SRMA by limiting new roads and construction support facilities within the SDA to within the designated utility corridor and/or reducing or eliminating roads and construction support facilities altogether within the SDA. Relocation of the national trail management corridor would not change the impacts to the resources, qualities, values, and associated settings, and the primary use or uses of the trail because the transmission line would still cross the NST perpendicularly at some point.

National Historic Trails

Overland Trail. Alternative I-A would cross the Overland Trail at a point approximately 16 miles south of Wamsutter, Wyoming, about 0.25 mile east of the trail's intersection with Wamsutter Road (see **Figure 3.15-10**). The segment of trail crossed by the alternative is a non-contributing segment to the trail's overall NRHP eligibility. Towers would be placed to avoid surface disturbance near the actual trail; however, because the trail crossing would be located on private land, it would not be subject to BLM's historic trail NSU stipulations as specified in the Rawlins RMP. Alternative I-A would be visible from the Overland Trail for 9 miles of trail, 4 of which (44 percent) are contributing segments. There are no associated recreation facilities or interpretive features located within the viewshed and there are numerous well pads and access roads in the area. The transmission line would be "sky-lined" (increased impact) in these areas (Section 3.12, Visual Resources); however, scenic quality is low in this area (Class C).

Overall, these impacts would not preclude development of a management corridor for the Overland Trail, since the crossing would occur on a non-contributing segment and in an area of low scenic quality, the viewshed would include relatively few miles (and even fewer contributing segments) of the trail, and the BLM Rawlins FO contains other areas with higher associated settings that could be used for trail interpretation.

Cherokee Trail. Alternative I-A would cross the Cherokee Trail approximately 20 miles west of Baggs, Wyoming, at a point where the Cherokee Trail runs in a north-south direction adjacent to an unnamed dirt road. The crossing would be located approximately 0.5 mile from both Cherokee Wash Road (to the north) and Cherokee Reservoir (to the southeast). The segment of trail that would be crossed by the alternative is a non-contributing segment to the trail's overall NRHP eligibility. The crossing would be located on BLM lands and would not be within a designated utility corridor. Towers would be placed to avoid surface disturbance near the actual trail and would span washes and other natural features associated with the trail location; however, because towers are typically placed a maximum of 1,500 feet apart, it is unlikely that the alternative would conform with BLM's NSU stipulation of 0.25 mile on both sides of the trail as specified in the BLM Rawlins RMP. However, the placement of this crossing adjacent to a dirt road does satisfy the RMP stipulation that linear crossings of the trails occur in previously disturbed areas. Per the BLM Rawlins FO RMP, non-contributing segments are not managed for the preservation of historic values; however, the RMP predates the issuance of BLM National Trails Manual policy for study trails. Alternative I-A would be visible from the Cherokee Trail for approximately 23 miles of trail, 10 of which (40 percent) contribute to the trail's overall NRHP eligibility. The transmission line would be "sky-lined" (increased impact) in these areas, and the scenic quality rating would be reduced from Class B (average) to Class C (low, see Section 3.12, Visual Resources and **Appendix I**). There are no associated historic sites, recreation facilities, or interpretive features within the viewshed.

Overall, these impacts would not preclude development of a management corridor for the Cherokee Trail since the trail crossing would occur on a non-contributing segment and in a previously disturbed area; however, development of this alternative would reduce scenic quality ratings along 23 miles of the trail. In general, this mileage would not be likely to be used for trail interpretation, due to its relative lack of high associated settings and accessible public access. The BLM Rawlins FO contains portions of the Cherokee Trail with higher associated settings that would be more appropriate for future trail interpretation.

Mitigation identified in Section 3.12, Visual Resources, includes measures to reduce visual impacts through use of BLM environmental colors; location of structures, roads, and other project elements as far back from road, trail, and river crossings as possible; and, where feasible, employing terrain and vegetation to screen views from crossings.

Alternative I-B (Agency Preferred)

Alternative I-B would cross the CDNST and CDNST SRMA and portions of the Overland and Cherokee historic trails. Alternative I-B would not cross any BLM SDAs IRAs, or URUD areas.

National Scenic Trails

Impacts to the CDNST would be identical to Alternative I-A, because the location of the NST crossing would be the same.

National Historic Trails

Overland Trail. Impacts to the Overland Trail would be the same as Alternative I-A, because the crossing location would be identical.

Cherokee Trail. Alternative I-B would cross the Cherokee Trail approximately 16 miles west of Baggs, Wyoming, at a point where the trail is located next to a small ephemeral wash. The segment of trail that would be crossed by the alternative is a non-contributing segment to the trail's overall NRHP eligibility. The crossing would be located on BLM lands and would not be within a designated utility corridor, but the crossing would be adjacent to previously disturbed areas. The transmission line would span the actual trail; however, as with Alternative I-A, it is unlikely that the alternative would comply with BLM's NSU stipulation within 0.25 mile on both sides of the trail as specified in the Rawlins RMP. Per the BLM Rawlins FO RMP, non-contributing segments are not managed for the preservation of historic values; however, the RMP predates the issuance of BLM National Trails Manual policy for study trails. The transmission line would be visible for 27 miles of the trail, 11 of which (41 percent) would be contributing segments. There are no known associated historic sites, recreation facilities, or interpretive features within the viewshed. The transmission line would be "sky-lined" (increased impact) in these areas, and the scenic quality rating would be reduced from Class B (average) to Class C (low, see Section 3.12, Visual Resources and **Appendix I**).

Overall, these impacts would not preclude development of a management corridor for the Cherokee Trail, since the trail crossing would occur on a non-contributing segment and in a previously disturbed area; however, development of this alternative would reduce scenic quality ratings along 27 miles of the trail. In general, this mileage would not likely be used for trail interpretation, due to its relative lack of high associated settings and accessible public access. The BLM Rawlins FO contains portions of the Cherokee Trail with higher associated settings that would be more appropriate for future trail interpretation.

Mitigation identified in Section 3.12, Visual Resources, includes measures to reduce visual impacts through use of BLM environmental colors; location of structures, roads, and other project elements as far back from road, trail, and river crossings as possible; and, where feasible, employing terrain and vegetation to screen views from crossings.

Alternative I-C

Alternative I-C would cross the CDNST and CDNST SRMA and portions of the Overland and Cherokee historic trails. Alternative I-C would not cross any BLM SDAs, IRAs, or URUD areas.

National Scenic Trails

Impacts to the CDNST would be identical to Alternative I-A, because the location of the NST crossing would not change.

National Historic Trails

Overland Trail. Alternative I-C would cross one segment of the Overland Trail along SH-789, approximately 18 miles south of the intersection of SH-789 and I-80. The segment of trail crossed by the alternative is a contributing segment to the trail's overall NRHP eligibility, and there is an interpretive sign located on SH-789 where the trail crosses the highway. Towers would be placed to avoid surface disturbance near the actual trail; however, because the trail crossing would be located on private land, it would not be required to conform with BLM's historic trail NSU stipulations specified in the BLM Rawlins RMP. Alternative I-C would be visible from the Overland Trail for 8 miles of trail, 6 of which (75 percent) are contributing segments. The transmission line would be "sky-lined" (increased impact) in these areas (Section 3.12, Visual Resources); however, scenic quality is low in this area (Class C). There are no developed recreation sites located within the viewshed. Washakie Station, one of the few associated historic sites with standing ruins, is located about 3.75 miles east of the highway, near Muddy Creek.

Although these impacts would not preclude development of a management corridor for the Overland Trail, development of Alternative I-C would reduce opportunities for protection or interpretation of high value sites since it would cross a contributing segment and an existing interpretive site along a well-traveled road; and the viewshed would incudes contributing segments, and potentially, an associated historic site

Cherokee Trail. Alternative I-C would cross one segment of the Cherokee Trail approximately 12 miles north of Baggs and less than 1 mile east of SH-789. The segment of trail that would be crossed by the alignment contributes to the trail's overall NRHP eligibility. Towers would be placed to avoid surface disturbance near the actual trail and would span washes and other natural features associated with the trail location. Because towers are typically placed a maximum of 1,500 feet apart, it is unlikely that the alternative would conform with BLM's 0.25 mile NSU stipulation on both sides of the trail specified in the BLM Rawlins RMP. Additionally, the trail crossing (located on BLM lands about 1 mile east of the SH-789 and outside of the designated utility corridor) would not be in conformance with the RMP stipulation that linear crossings of the trails occur in previously disturbed areas. A plan amendment would be required to allow expansion of the designated utility corridor to include the trail crossing. Alternative I-C would be visible from the Cherokee Trail for approximately 10 miles, 4 of which (40 percent) contribute to the trail's overall NRHP eligibility. There are no interpretive signs located on the highway and no associated historic sites located within the viewshed. However, Alternative I-C would cross Muddy Creek and Cherokee Creek, two perennial water sources that are associated with the Cherokee Trail and undoubtedly influenced the trail location. Alternative I-C would cross Muddy Creek about 1 mile north of the Cherokee Trail and would be located between the highway and the trail crossing, within the expanded designated utility corridor. The Cherokee Creek crossing would be located directly adjacent to the proposed Cherokee Trail crossing and also would be located within the expanded designated utility corridor. The transmission line would be "sky-lined" (increased impact) in these areas, and the scenic quality rating would be reduced from Class B (average) to Class C (low, see Section 3.12, Visual Resources and **Appendix I**).

Although these impacts would not preclude development of a management corridor for the Cherokee Trail, development of Alternative I-C would reduce opportunities for protection or interpretation of high value sites since it would cross a contributing segment and two waterbodies that are part of the associated setting and may provide opportunities for future for trail interpretation; scenic quality ratings would be reduced, and the viewshed includes several contributing segments.

Mitigation identified in Section 3.12, Visual Resources, includes measures to reduce visual impacts through use of BLM environmental colors; location of structures, roads, and other project elements as far back from road, trail, and river crossings as possible; and, where feasible, employing terrain and vegetation to screen views from crossings.

Alternative I-D

Alternative I-D would cross the CDNST and CDNST SRMA and portions of the Overland and Cherokee historic trails. Alternative I-D would not cross any BLM SDAs, IRAs, or URUD areas.

National Scenic Trails

Impacts to the CDNST would be identical to Alternative I-A, because the location of the NST crossing would be identical.

National Historic Trails

Overland Trail. Alternative I-D would cross one segment of the Overland Trail, about 0.3 mile east of Wamsutter Road and about 2 miles east of the proposed Alternative I-A/B crossing. Impacts would be similar to Alternative I-A, except that the trail would be visible from about 8 miles of trail, 4 of which are contributing segments.

Cherokee Trail. Alternative I-D would cross the Cherokee Trail in three locations.

- Approximately 14 miles north of Baggs and 3 miles west of SH-789. The segment of trail that would be crossed is located adjacent to a dirt road used to provide access to oil and gas well pads. There are no associated historic sites, recreation facilities, or interpretive features located near trail segments in this area. The trail crossing would be located on BLM land and would not be located within a designated utility corridor. The transmission line would be "sky-lined" (increased impact) in these areas, and the scenic quality rating would be reduced from Class B (average) to Class C (low, see Section 3.12, Visual Resources and **Appendix I**).
- Approximately 13 miles west of Baggs, Wyoming, near the junction of Shell Creek Stock, Poison Butte, and W. Hangout Roads. The segment of trail that would be crossed is located adjacent to a large wash (Sand Creek) that drains into the Little Snake River. There are no associated historic sites, recreation facilities, or interpretive features near trail segments in this area. The trail crossing would be located on BLM land and would not be within a designated utility corridor. The transmission line would be "sky-lined" (increased impact) in these areas (Section 3.12, Visual Resources); however, scenic quality is low in this area (Class C).
- In the same location as Alternative I-B and approximately 3.5 miles southwest of the Sand Creek crossing, as described above.

All three segments of the Cherokee Trail that would be crossed by the alternative are non-contributing segments to the trail's overall NRHP eligibility. Towers would be placed to avoid surface disturbance near the actual trail and washes; however, because towers are typically placed a maximum of 1,500 feet apart, it is unlikely that the alternative would comply with the Rawlins RMP, including the NSU stipulation within 0.25 mile on both sides of the trail. However, the proposed location would be in compliance with the RMP stipulation that linear crossings of the trails occur in previously disturbed areas, as there is an old dirt road and evidence of other surface disturbing activities at each of these crossings. Per the BLM Rawlins FO RMP, non-contributing segments are not managed for the preservation of historic values; however, the RMP predates the issuance of BLM National Trails Manual policy for study trails. Alternative I-D would be visible from the Cherokee Trail for approximately 29 miles, 11 of which (38 percent) are contributing segments. There are no associated historic sites, recreation facilities, or interpretive features near trail segments within the viewshed.

Overall, these impacts would not preclude development of a management corridor for the Cherokee Trail, since trail crossings would occur on non-contributing segments and in previously disturbed areas, however, development of this alternative would review scenic quality ratings along 29 miles of the trail. In general, this mileage would not be likely to be used for trail interpretation, due to its relative lack of high associated settings and accessible public access. The BLM Rawlins FO contains other portions of the Cherokee Trail with higher associated settings that could be used for trail interpretation.

Mitigation identified in Section 3.12, Visual Resources, includes measures to reduce visual impacts through use of BLM environmental colors; location of structures, roads, and other project elements as far back from road, trail, and river crossings as possible; and, where feasible, utilizing terrain and vegetation to screen views from crossings.

Micro-siting Options in Region I

Alternatives I-A/B/C/D would cross a conservation easement (the Tuttle Ranch) that has restrictions for siting overhead transmission lines. Two micro-siting adjustments have been developed that would relocate the 250-foot-wide transmission line ROW outside of the easement area and across an access road (Deerlodge Road) with an associated scenic easement, which provides access to the 200,000-acre Dinosaur National Monument:

- Under Tuttle Ranch Micro-siting Option 3, the alignment and refined transmission corridor would cross an NPS-owned portion of Deerlodge Road approximately 0.4 mile west of US-40. The scenic easement area at this crossing has not yet been acquired by the NPS.
- Under Tuttle Ranch Micro-siting Option 4, the alignment and refined transmission corridor would cross Deerlodge Road on a portion of the road owned by the State of Colorado about 1.5 miles west of US-40. The scenic easement area at this crossing also is owned by the State.

Under Tuttle Ranch Micro-siting Option 3, there would be approximately 11 acres of the refined transmission corridor across NPS lands. This represents the area in which ROW shifts could take place and where most road and construction staging areas would be located, and would comprise less than 0.1 percent of the NPS lands in the area. There would be the potential for an estimated 1 acre of ROW vegetation clearing, less than 1 acre of construction surface disturbance and 0.1 acre of operations surface disturbance within NPS lands. TransWest would span Deerlodge Road and would work with the NPS during development of the construction POD on tower micro-siting and construction timing to minimize visual impacts, ensure that project construction would not interfere with the timing of proposed Deerlodge Road upgrades, and minimize impacts to recreational visitation. BMPs also would require consolidation of nearby access roads, support areas, and other infrastructure to minimize disturbance and would require reclamation of any roads not needed for operations.

The primary values and resources for which the park was designated or for which the park is managed (paleontological features, vegetation and wildlife, and river recreation) would be maintained; however, the transmission alignment would be “sky-lined” and visible from Deerlodge Road. The placement of the line across Deerlodge Road would affect the ability of the NPS to protect visual quality along this portion of the road through the same types of scenic easements that are in place for portions of the road farther within Dinosaur National Monument. Per 2006 NPS Park Management Policy, ROWs may be issued only pursuant to specific statutory authority and generally only if there is no practicable alternative to such use of NPS lands. Alternatives to crossing the Dinosaur National Monument do exist, namely Alternative I-A/B/C/D (through the Tuttle Ranch) or Micro siting Option 4, which would cross Deerlodge Road on state lands. The Tuttle Ranch Micro-siting Option 3 would have increased impacts to the SDA as compared to the Alternative I-A/B/C/D, because it would cross Congressionally designated national monument lands and would affect the ability of the NPS to protect visual quality along this portion of the road for future generations.

Under Tuttle Ranch Micro-siting Option 4, the Deerlodge Road crossing would be located on a portion of the road owned by the State of Colorado; however, the refined transmission corridor includes a small portion (less than 4 acres) of NPS lands. This represents the area in which ROW shifts could take place and where most road and construction staging areas would be located. Modeled disturbance calculations estimate 1 acre of ROW vegetation removal (less than 0.1 percent of NPS lands in the area), less than 1 acre of construction surface disturbance and 0.1 acre of operations surface disturbance within NPS lands. These acreages assume that there is potential for some portions of ROW clearing, tower sites, roads, and/or construction support areas to move within the refined transmission

corridor as site-specific adjustments are made. If the 250-foot-wide transmission line ROW does not shift, there would be no disturbances on NPS lands.

Application of **SDA-1** and **SDA-2** would eliminate road or construction support area surface disturbance within all NPS lands. Application of **SDA-5** (use of Level 3 Selective ROW Clearance Based vegetation management methods) is proposed to further reduce visual operational impacts from ROW clearing. Use of Level 3 vegetation management techniques would allow increased ROW vegetation heights as along as vegetation does not encroach on the required minimum clearances (about 29 feet), allowing a greater diversity of vegetation to become reestablished and reducing visual impacts. This mitigation would only be effective in pinyon juniper areas located along the Tuttle Ranch Micro-siting Option 4, and would not reduce impacts in low growing sagebrush scrubland and saltbrush scrublands vegetation communities along the rest of the route. Selective clearing also would not mitigate visual impacts from the transmission line itself, which would still cross the Deerlodge Road perpendicularly and would be "sky-lined" with those contrasts. Regardless of the land ownership of the alignment and construction areas, the viewshed of the completed transmission line would affect National Monument lands and also would affect the ability of the NPS to protect visual quality along a greater portion of the road for future generations. The presence of the transmission line may make it more difficult or less desirable to acquire this road segment and have full ownership of Deerlodge Road. However, the crossing would be in compliance with GMP stipulations because it would not be located on NPS lands and the NPS would be not be required to issue a ROW grant.

Alternative Variation in Region I

There are no alternative variations within Region I.

Alternative Connectors in Region I

There are no alternative connectors within Region I.

Alternative Ground Electrode Systems in Region I

A ground electrode system of approximately 600 acres in size would be necessary in Region I within 50 to 100 miles of the Northern Terminal, as discussed in Chapter 2.0. Although the location for this system has not been determined, conceptual locations and connections to the alternative routes have been provided by the Project Applicant. The ground electrode system alternative locations in Region I are depicted in Chapter 2.0 in **Figure 2-21**. The conceptual sites would not include any SDAs; however, the Eight-mile Basin ground electrode system siting area includes 407 acres of the CDNST, which would traverse across the middle of the siting area. There would be modeled potential for an estimated 8 acres of construction disturbance and 2 acres of operations disturbance to occur within this area. Application of **SDA-1** (avoidance of new road construction in SDAs) would eliminate construction of any access roads within this area. Application of **SDA-4** (siting ground electrode systems outsides of designated SDAs) is proposed to further eliminate impacts to SDAs. Application of these mitigations would eliminate construction impacts to the CDNST SDA. Once construction is completed, visual impacts to the CDNST would be minimal, as the lower voltage connector lines connecting the ground electrode system to the transmission line would be located parallel to, but over 1 mile away from, the CDNST.

Region I Conclusions

Alternatives I-A, I-B, I-C, and I-D would have equal effect on the CDNST. The alternatives would be consistent with management of the CDNST SRMA and would not affect BLM's ability to effectively manage the nature and purposes of the entire 3,100-mile CDNST, or its resources, qualities, values, and associated settings, and the primary use or uses.

Alternative I-C would have the greatest impacts on the Overland and Cherokee Trail management, as it would cross trail segments that contribute to the Overland and Cherokee Trails' NHT status, and would not conform with NSU stipulations. Alternative I-C's viewshed would affect the most contributing mileage

to the Overland Trail, as well as an interpretive marker, and, potentially an associated historic site. Alternative I-C also would cross Muddy and Cherokee creeks, perennial waterbodies associated with the Cherokee Trail, and would result in a reduction in scenic quality (from Class B to Class C) for areas surrounding the Cherokee Trail. Although these impacts would not preclude development of a management corridor for either trail, development of Alternative I-C would have the greatest reduction in opportunities for protection or interpretation of high value sites. Alternatives I-A and I-B both would cross non-contributing segments of the Overland and Cherokee trails Viewshed impacts from Alternatives I-A and I-B are identical with respect to the Overland Trail. For the Cherokee Trail, both alternatives would result in a reduction in scenic quality (from Class B to Class C) for areas surrounding the trail; however, Alternative I-A would be visible from 4 fewer miles of the trails. Impacts from Alternative I-D to the Overland Trail would be similar to Alternatives I-A and I-B. Alternative I-D would cross two more segments of the Cherokee Trail (non-contributing) than either Alternative I-A and I-B. Scenic quality would be reduced from Class B to Class C and affected mileage would be more than Alternative I-A and less than Alternative I-B. Overall, these impacts would not preclude development of a management corridor for either trail, however, Alternative I-A retains the most opportunities for protection or interpretation of high value sites. Once the final route is selected, an intensive Class III inventory and in-depth setting analysis would be conducted to determine the impact to contributing Overland and Cherokee trail segments crossed by the route or from which the route would be visible. If contributing segments would be adversely affected, the effects would be minimized or mitigated onsite or offsite as stipulated in the mitigations proposed in Section 3.11, Cultural Resources (**CUL-3**), as stipulated in the Cultural Resources PA developed for the Project, and through implementation of Design Features and BMPs in concert with the NPS and the Wyoming BLM National Trails Management Program Lead.

The Tuttle Ranch Micro-siting Options 3 and 4 would both result in greater impacts to Dinosaur National Monument lands than any of the alternatives, but Tuttle Ranch Micro-siting Option 4 would avoid construction on Dinosaur National Monument lands.

3.15.6.4 Region II

Tables 3.15-7 through **3.15-9** provide a list of Region II SDAs that would be within the refined transmission corridor, as well as those SDAs that would be outside of the refined transmission corridor but within areas in which temporary construction support areas or temporary or permanent roads could be constructed. For more information on the surface disturbance model, please see Section 3.1. These areas are depicted in **Figures 3.15-2**, **3.15-6**, **3.15-11**, and **3.15-13** through **3.15-15**.

Alternative II-A (Applicant Proposed)

Alternative II-A would cross two IRAs and the refined transmission corridor also would include a small portion of two additional IRAs. Both the refined transmission corridor as well as the area in which roads or construction support areas could be located would be south of the Dinosaur National Monument visitor entrance, but would not encroach onto the monument proper. Alternative II-A would not cross NHTs or BLM-designated ACECs.

In response to land use constraints, three micro-siting adjustments (Fruitland Micro-siting Options 1, 2, and 3) have been developed along a portion of Alternative II-A east of Fruitland, Utah. There are no SDAs located within or near this portion of Alternative II-A or the micro-siting options it would replace. Micro-siting options within the Uinta National Forest Planning Area are discussed under the Chipman Creek IRA, below.

BLM SDAs

There would be no impact to BLM SDAs.

Table 3.15-7 Region II: BLM SDAs within Areas of Potential Impact

Field Office	Special Designation Area	Alternative II-A	Alternative II-B	Alternative II-C	Alternative II-D	Alternative II-E	Alternative II-F	Alternative II-G
		Align. (mi) / 250-ft ROW (ac) Modeled Veg removal / constr./oper. dist. (ac)	Align. (mi) / 250-ft ROW (ac) Modeled Veg removal / constr./oper. dist. (ac)	Align. (mi) / 250-ft ROW (ac) Modeled Veg removal / constr./oper. dist. (ac)	Align. (mi) / 250-ft ROW (ac) Modeled Veg removal / constr./oper. dist. (ac)	Align. (mi) / 250-ft ROW (ac) Modeled Veg removal / constr./oper. dist. (ac)	Align. (mi) / 250-ft ROW (ac) Modeled Veg removal / constr./oper. dist. (ac)	Align. (mi) / 250-ft ROW (ac) Modeled Veg removal / constr. / oper./dist. (ac)
White River FO	Oil Spring Mountain ACEC	N/A	0 / <1 <1 / 0 / 0	0 / <1 <1 / 0 / 0	N/A	N/A	N/A	N/A
	Oil Spring Mountain WSA	N/A	0 / 0 0 / 0 / 0	0 / 0 0 / 0 / 0	N/A	N/A	N/A	N/A
	White River Riparian ACEC	N/A	0 / 0 4 / 2 / <1	0 / 0 4 / 2 / <1	N/A	N/A	N/A	N/A
Grand Junction FO	McInnis Canyons NCA	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Badger Wash ACEC	N/A	0 / 0 0 / 1 / <1	0 / 0 0 / 1 / <1	N/A	N/A	N/A	N/A
	Demaree WSA	N/A	0 / 0 0 / 0 / 0	0 / 0 0 / 0 / 0	N/A	N/A	N/A	N/A
Vernal FO	Lower Green River Corridor ACEC	N/A	N/A	N/A	1 / 20 15 / 13 / 3	N/A	1 / 20 15 / 13 / 3	N/A
	Lower Green River WSR	N/A	N/A	N/A	1 / 19 14 / 12 / 4	N/A	1 / 19 14 / 12 / 4	N/A
	Lears Canyon ACEC	N/A	N/A	N/A	0 / 8 <0.1 / 0.1 / <0.1	N/A	0 / 8 <0.1 / 0.1 / <0.1	N/A
	Nine Mile Canyon ACEC	N/A	N/A	N/A	0 / 0 0 / 6/ 3	N/A	0 / 0 0 / 6 / 3	N/A
Price FO	San Rafael Canyon ACEC	N/A	N/A	0 / 0 0 / 4 / 1	N/A	N/A	N/A	N/A
	Rock Art ACEC	N/A	N/A	0 / 0 0 / <.5 / <.5	N/A	N/A	N/A	N/A

Note: See Introduction to Section 3.15.4 for an explanation of how the combination of impact indicators describes the SDA location in relation to the alignment, 250-foot-wide transmission line ROW, refined transmission corridor, and area outside of the refined transmission corridor in which roads or construction support areas may be located. For more information about disturbance modeling, please see Section 3.1.

Table 3.15-8 Region II: USFS SDAs within Areas of Potential Impact

National Forest	Special Designation Area	Alternative II-A Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)	Alternative II-B Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)	Alternative II-C Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)	Alternative II-D Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)	Alternative II-E Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)	Alternative II-F Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)	Alternative II-G Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)
IRAs								
Ashley	IRA 401009	NA	N/A	N/A	0 / 0 <0.1 / <0.1 / 0	NA	0 / 0 <0.1 / <0.1 / 0	NA
	IRA 401010	N/A	N/A	N/A	N/A	9 / 267 51 / 29 / 3	N/A	N/A
	IRA 401011	N/A	N/A	N/A	N/A	0 / <1 42 / 29 / 4	NA	N/A
Uinta [1]	IRA 418008 (Chipman Creek)	2 / 72 21 / 14 / 4	N/A	N/A	N/A	N/A	N/A	2 / 72 21 / 14 / 4
	IRA 418017 (Tie Fork)	0 / 0 0/ <0.1 / 0	N/A	N/A	NA	0 / 0 0/ <0.1 / 0	0 / 0 0/ <0.1 / 0	0 / 0 0/ <0.1 / 0
	IRA 418009 (Willow Creek)	0 / 0 0 / <0.1 / 0	N/A	N/A	NA	NA	NA	0 / 0 0 / <0.1 / 0
Manti-La Sal	Cedar Knoll	0.3 / 9 2 / 1 / 0	N/A	N/A	N/A	0.3 / 9 2 / 1 / 0	0.3 / 9 2/1/0	0.3 / 9 2 / 1 / 0
	Boulger-Black Canyon	N/A	0 / 0 0 / 1 / 1	N/A	N/A	N/A	N/A	N/A
	East Mountain	N/A	0 / 0 0 / <1 / 0	N/A	N/A	N/A`	N/A	N/A
URUD Areas								
Ashley	Cottonwood	N/A	N/A	N/A	N/A	0 / <1 31 / 18 / 2	N/A	N/A
Ashley	Sowers Canyon East	NA	NA	NA	NA	8 / 248 48 / 28 / 3	NA	NA
Fishlake	Browns Hole	N/A	N/A	6 / 198 230 / 116 / 20	N/A	N/A	N/A	N/A
Manti-La Sal	Cedar Knoll	<0.5 / 12 2 / 10 / 7	N/A	N/A	N/A	<0.5 / 12 2 / 10 / 7	<0.5 / 12 2 / 10 / 7	<0.5 / 12 2 / 10 / 7

[1] There are no URUD areas within the Uinta National Forest Planning Area.

Note: See Introduction to Section 3.15.4 for an explanation of how the combination of impact indicators describes the SDA location in relation to the alignment, 250-foot-wide transmission line ROW, refined transmission corridor, and area outside of the refined transmission corridor in which roads or construction support areas may be located. For more information about disturbance modeling, please see Section 3.1.

Table 3.15-9 Region II: National Monuments and National Historic Trails

Land Management Agency	Special Designation Area	Alternative II-A Align. (mi) / 250-ft ROW (ac) Modeled veg removal / constr./oper. dist. (ac)c	Alternative II-B Align. (mi) / 250-ft ROW (ac) Modeled veg removal / constr./oper. dist. (ac)	Alternative II-C Align. (mi) / 250-ft ROW (ac) Modeled veg removal / constr./oper. dist. (ac)	Alternative II-D Align. (mi) / 250-ft ROW (ac) Modeled veg removal / constr./oper. dist. (ac)	Alternative II-E Align. (mi) / 250-ft ROW (ac) Modeled veg removal / constr./oper. dist. (ac)	Alternative II-F Align. (mi) / 250-ft ROW (ac) Modeled veg removal / constr./oper. dist. (ac)	Alternative II-G Align. (mi) / 250-ft ROW (ac) Modeled veg removal / constr./oper. dist. (ac)
Dinosaur National Monument (NPS)								
		0 / 0 0 / 0 / 0	N/A	N/A	0 / 0 0 / 0 / 0	0 / 0 0 / 0 / 0	0 / 0 0 / 0 / 0	0 / 0 0 / 0 / 0
Old Spanish NHT (BLM/NPS)								
Number of crossings and segment rating		0 segment crossed	4 segments crossed); 1 segment NHT II, 1 segment NHT III, 2 segments NHT V	11 segments crossed: 1 segment NHT II, 1 segment NHT III, 5 segments NHT V, and 4 segments not categorized[1]	0 segments crossed	0 segments crossed	0 segments crossed	0 segments crossed
Visibility of the alternative from the trail[1]		N/A	Visible along 58 miles of trail, of which 7 miles are NHT II, 6 miles are NHT III, 27 miles are NHT IV, and 18 miles are NHT V	Visible along 108 miles of trail, of which 17 miles are NHT II, 8 miles are NHT III, 31 miles are NHT IV, and 27 miles are NHT V, and 25 miles are not categorized	N/A	N/A	N/A	N/A
Associated Historic Sites and natural features, and nearby recreation or interpretive features		N/A	N/A	N/A	N/A	N/A	N/A	
Management/Land Use		N/A	All crossings on BLM lands, within designated utility corridors	7 crossings on BLM lands within designated corridor; 4 crossings on USFS land (1 within designated utility corridor)	N/A	N/A	N/A	N/A

[1] Crossings on USFS land are unevaluated.

Note: See Introduction to Section 3.15.4 for an explanation of how the combination of impact indicators describes the SDA location in relation to the alignment, 250-foot-wide transmission line ROW, refined transmission corridor, and area outside of the refined transmission corridor in which roads or construction support areas may be located. For more information about disturbance modeling, please see Section 3.1.

USFS IRAs and URUD Areas

Alternative II-A would cross approximately 2 miles of the Chipman Creek IRA within the Uinta National Forest Planning Area and approximately 0.3 mile of Cedar Knoll IRA/URUD area within the Manti-La Sal National Forest. The refined transmission corridor also would include a small amount of the Tie Fork and Willow Creek IRAs (both within the Uinta National Forest Planning Area).

Chipman Creek IRA. Within the Uinta National Forest Planning Area, the alignment and refined transmission corridor would be primarily within a designated utility corridor that includes an existing transmission line, except for a 2-mile segment where the designated utility corridor shifts abruptly to the east. In this area, the refined transmission corridor would not stay within the confines of the designated utility corridor, but would cross a portion of the 9,360-acre IRA 418008 (Chipman Creek IRA). The refined transmission corridor would return to the designated utility corridor boundaries where the designated utility corridor shifts back to the west (**Figure 3.15-15**). The proposed alignment would be located about 0.25 mile from the southern edge of the Chipman Creek IRA and FR-335. As currently mapped, the 250-foot-wide transmission line ROW would be located entirely within the IRA and the alignment would cross the IRA. The refined transmission corridor, which represents the maximum extent in which ROW shifts could occur and where most roads and construction support areas would be located, contains areas both within and outside of the IRA.

Roadless construction methods (as identified in the POD, see **Appendix D**) would be used within IRAs to ensure compliance with the Roadless Rule. Roadless construction methods include the use of helicopter construction techniques supported by minimal impact overland travel. Low-impact vehicles and equipment would be used for overland access and ground-based site work. “Drive and Crush” overland access would be employed whenever possible and no blade work would be performed to assist overland travel within the IRAs. TransWest is not proposing to build or maintain any new temporary or permanent roads across IRAs and there will be no addition of Forest classified or temporary road miles for either construction or maintenance of the Project. Construction disturbances within this IRA would be generally limited to ROW vegetation removal, and development of structure work area and wire-pulling, tensioning and splicing sites associated with the construction of towers (2 miles of alignment, between 8 and 12 towers within the IRA), and overland access. Modeled disturbance calculations estimate 21 acres of area where ROW vegetation clearing would occur (0.2 percent of the IRA), 14 acres of construction surface disturbance, and 4 acres of operations disturbance within the IRA.

These acreages assume that there is potential for some portions of ROW clearing, tower sites, and/or construction support areas to move outside of the IRA as site-specific adjustments are made. If the 250-foot-wide transmission line ROW does not shift, approximately 72 acres (1 percent) of the IRA would be subject to ROW vegetation clearing and/or surface disturbance. These activities could alter natural vegetation processes where overstory vegetation is removed, potentially altering the understory vegetation. Establishment of tower sites, structure work areas, or overland access within the ROW or refined transmission corridor for construction vehicles and equipment needed at the sites may alter and or disrupt natural drainage patterns and contribute to sedimentation of waterways in the area. There are no impaired streams within the IRA; however, the IRA contains tributaries to Strawberry Reservoir, which is a 303(d) listed waterbody. TransWest would use Design Features and BMPs to minimize vegetation removal, avoid root damage, and reduce sedimentation (see TWE- 11, TWE-26 through 28, and TWE-8, TWE-19, TWE-22, among others), and would develop vegetation and noxious weed management plans to reduce impacts to ecological systems and protect waterbodies within the IRA. After construction is complete, work areas would be re-contoured as needed to reestablish any altered natural drainage patterns. Vegetation within the 250-foot-wide transmission line ROW would be reestablished in accordance with USFS seed mix requirements and in accordance with TWE’s vegetation management practices. Areas used for overland access would be restored as necessary.

Reclamation areas would be monitored for 3 to 5 years in accordance with USFS requirements (see **Appendix D**). The reestablished vegetation would reduce effects from erosion or sedimentation on waterways in the area, but ROW vegetation may not ever return to the original vegetation communities. Standard ROW vegetation management (which as modeled would include 21 acres of the IRA, and if the ROW does not shift would include 72 acres, or 1 percent of the IRA) would continue for the life of the Project.

All construction disturbance areas within the Chipman Creek IRA would be in areas designated as part of the roaded natural (RN) ROS class. This ROS class is managed to allow moderate evidence of sights and sounds of human activity but may be modified by roads or recreation facilities. Transmission line construction would be beyond expected conventional motorized use and not consistent with the ROS designation for this area (Section 3.13, Recreation Resources, for more information) but impacts from construction noise, traffic and other activities would be temporary. The sight and sounds of construction also would have the potential to be seen or heard through much of the southern part of the IRA and would add to the human influence on conditions within the IRA, but impacts would be temporary. Visitor access to the IRA via FR-335 and other roads also could be temporarily affected; however, this area does not offer the most opportunity within the IRA for solitude or primitive recreation. Once constructed within the IRA, the transmission line and cleared ROW would be apparent to visitors from 57 percent of Chipman Creek IRA. While the new structures would be positioned approximately 0.15 mile from an existing 345-kV transmission line, the viewshed of the proposed transmission line would be larger than the area currently affected by the existing transmission line (due to increased structure height and placement farther into the IRA). The viewshed would include 59 percent (3,361 acres) of the IRA's SPM areas (the most primitive ROS class within the IRA) and almost 80 percent of RN areas within the IRA. Class A and Class B SQRUs within the viewshed would not be reduced to lower classes and the project would meet visual compliance standards due to the presence of an existing transmission line Recreation values along FR-335 may become dominated by transmission lines since the existing transmission line already influences views along this area and due to the larger relative scale of the Project, would further define this area as a transmission line corridor. Access for visitors to the IRA via FR-335 and other roads would remain largely unchanged.

The Chipman Creek IRA would still be greater than 5,000 acres and over 97 percent would remain unfragmented. These changes in the wilderness qualities would not be large enough to preclude management of the IRA as a whole; however, the placement of the Project ROW away from the southern border of the IRA would result in additional IRA fragmentation and increased impacts to manageability from edge effects. A 228-acre portion of the IRA (2 percent of the IRA) along FR-335 and the IRA southern boundary would be separated from the rest of the IRA by the proposed refined transmission corridor and the 250-foot-wide transmission line ROW. Additionally, the Project ROW would cross FR-335 in a perpendicular fashion where it would enter and leave the IRA. These crossings would provide increased opportunity for unauthorized ORV use within the IRA, further affecting the natural appearance and integrity of the IRA. This area is already difficult to manage due to the existing transmission line, motorized travel along FR-335 and use of this part of this IRA along FR-335 as a snowmobile play area. The placement of the 250-foot-wide transmission line ROW partially within a designated snowmobile play area could encourage snowmobile users to go beyond play area boundaries. TransWest would use aircraft or non-motorized methods for maintenance and would work with the USFS to prevent unauthorized ROW travel by ORVs. Effects from maintenance activities (vegetation management, line inspection) would largely be limited to the area along where transmission line would cross FR-335 and the White River/Strawberry Road Scenic Backway. During these limited activities, personnel, vehicles, helicopters (potentially), and equipment would be seen and heard by visitors in this part of the IRA.

Application of **SDA-1** is proposed to eliminate construction staging areas/fly yards, material storage yards and batch plant sites within the IRA, thereby reducing modeled construction disturbance acreages within IRAs beyond the reductions gained from applicant-committed roadless construction techniques.

Application of **SDA-2** would ensure that during operations, any improved roads would be managed in conformance with the USFS Transportation Plan, and rehabilitated as appropriate. Application of **SDA-5** (use of Level 3 Selective ROW Clearance Based vegetation management methods) is proposed to further reduce vegetation, wildlife and visual operational impacts from ROW clearing. Visual impacts and proposed mitigation are discussed in greater detail in Section 3.12, Visual Resources, which also includes additional mitigation for areas that are adjacent to existing transmission lines, such as matching tower placement and ROW clearing methods (see **VR-1, VR-3, VR-4, VR5, VR-6, VR-9, VR-10, VR-11,** and **VR-12**). **SDA-6, SDA-7,** and **SDA-8** would reduce the amount and type of initial vegetation removal/ disturbance and protect the area's vegetation to the maximum amount possible. **SDA-9** and **SDA-10** would provide a process for developing site-specific plans and ensuring appropriate reclamation and visual mitigations have taken place. **SDA-11** would ensure that chemical agents would not be used for ROW vegetation maintenance.

Two micro-siting options have been proposed to further reduce impacts to the Chipman Creek IRA:

- Strawberry Micro-siting Option 2 would site the alignment approximately 0.2 mile to the south of the proposed route for Alternative II-A, closer to the IRA boundary and FR-335. There would still be approximately 2 miles of alignment within the IRA, but the acres of 250-foot-wide transmission line ROW within the IRA would be reduced by 6 acres. Fragmentation would be reduced by 186 acres and impacts to the viewshed would be reduced by approximately 10 percent. Like Alternative II-A, the alignment would cross FR-335 in a perpendicular fashion at the points where it enters and leaves the IRA. However, the alignment would have two additional road crossings at about the halfway point of the 2-mile segment. This would result in more opportunity for unauthorized ROW encroachment into the IRA by OHVs or snowmobiles than Alternative II-A, but would consolidate the encroachments to the area closest to the road and to the existing transmission line (and almost entirely within the snowmobile play area). Impacts to FR-335 are discussed in Section 3.13, Recreation Resources. Section 3.12, Visual Resources, also includes additional mitigation for areas that are adjacent to existing transmission lines, such as matching tower placement and ROW clearing methods.
- Strawberry IRA Micro-siting Option 3 would site the alignment approximately 0.3 mile to the south of the proposed route for Alternative II-A. This would remove the alignment and 250-foot-wide transmission line ROW from the Chipman Creek IRA entirely. The alignment would cross FR-335 and the existing transmission line near each end of the 2-mile micro-siting option segment and would cross FR 335 three more times at about the halfway point. Selection of Micro-siting Option 3 would result in the most consolidation of the linear features (road and transmission lines) that would affect wilderness character of the IRA. Although this option would cross FR-335 five times, all crossings would be outside of the IRA and would not provide more opportunity for encroachment into the IRA. Impacts to FR-335 are discussed in Section 3.12, Visual Resources, and Section 3.13, Recreation Resources.

Tie Fork and Willow Creek IRAs. Within the Uinta National Forest Planning Area, the refined transmission corridor also would include about 2 acres of the Tie Fork IRA and about an acre of the Willow Creek IRA. As currently mapped, the alignment and 250-foot-wide transmission line ROW for Alternative II-A would not cross these IRAs. Modeled disturbance calculations for each IRA estimate no ROW vegetation removal and less than 0.1 acre of construction surface disturbance, none of which would be permanent. However, if the 250-foot-wide transmission line ROW for Strawberry IRA Micro-siting Option 3 does not shift, there also would be approximately 1 acre (0.01 percent) within the Willow Creek IRA that would be subject to ROW vegetation clearing and/or surface disturbance. This acreage is anticipated to occur largely within the existing Mona-Bonanza 345-kV line ROW; thus any vegetation clearing would be minimal. Existing roads within the IRA associated with existing transmission lines would only be used for construction or mtaintenance activites if they are part of the Uinta National Forest

Planning Area's Travel Managment Plan. No travel would be allowed on unauthorized roads within IRAs. No road improvements or new roads would be allowed within IRAs.

Any surface disturbance woudl be minimized through the application of **SDA-1, SDA-2, SDA-5, SDA-6, SDA-7,** and **SDA-8. SDA-9** and **SDA-10** would provide a process for developing site-specific plans and ensuring appropriate reclamation and visual mitigations have taken place. **SDA-11** would ensure that chemical agents would not be used for ROW vegetation maintenance (if applicable).

Cedar Knoll IRA and URUD Area. Within the Manti-La Sal National Forest, Alternative II-A would cross approximately 0.3 mile of the 22,485-acre Cedar Knoll IRA and the 28,351-acre URUD area[3]. The refined transmission corridor would be located on the western edge of the IRA/URUD area (see **Figure 3.15-15**) and would generally parallel US-6 and US-89 and an existing transmission line. As currently mapped, the alignment and 250-foot-wide transmission line ROW would be located within the IRA/URUD area and one tower may be located within the IRA. The refined transmission corridor, which represents the maximum extent in which ROW shifts could occur and where most roads and construction support areas would be located, contains areas both within and outside of the IRA/URUD area. Modeled disturbance calculations estimate 2 acres of area where ROW vegetation clearing would occur (less than 0.1 percent of the IRA/URUD area), and 1 acre of construction surface disturbance, of which a fraction would be permanent. These acreages assume that there is potential for some portions of the tower sites, roads, and/or construction support areas to move outside of the IRA/URUD area as site-specific adjustments are made. If the 250-foot-wide transmission line ROW does not shift, approximately 9 acres of the IRA and 12 acres within the URUD area (less than 0.1 percent of the IRA and the URUD areas) would be subject to ROW vegetation clearing and/or surface disturbances. As discussed above (see the Chipman Creek IRA), TransWest TWE would apply Design Features and BMPs (specifically the development of vegetation and noxious weed management plans to reduce impacts to vegetation within the IRA. Application of USFS timing restrictions within crucial winter big game habitat would reduce impacts to habitat and wildlife throughout the area. There are no impaired streams within the IRA/URUD area. TransWest would use Design Features and BMPs to reduce sedimentation to protect nearby water resources such as those in Blind Canyon, and there would be no impact to the irrigation and community water supplies for Spanish Fork and Utah County. Construction disturbance areas within the IRA/URUD area would be in areas designated as RN and SPM ROS class. Transmission line construction would be beyond the conventional motorized use expected in these areas, but impacts from construction noise, existing road traffic, and other activity would be temporary (see Section 3.13, Recreation Resources, for more information about impacts to ROS areas). The sights and sounds of construction also would have the potential to be seen or heard through much of the western part of the IRA/URUD area, and also may affect the ability for visitors to access the northwestern portions of the IRA via Forest Road (FR)-126 and the non-motorized trail located in this area, further affecting qualities of remoteness.

Once constructed, the transmission line and cleared ROW would be apparent to visitors from approximately 6 percent of the Cedar Knoll IRA and 8 percent of the URUD area. The viewshed would include 5 percent (947 acres) of the IRA's SPM ROS class areas (the most primitive ROS class within the IRA) and about 9 percent of all RN areas. Within the URUD area, the acres of SPM ROS class would be about 1,790 acres, roughly 8 percent of the URUD area. Access for visitors to the IRA/URUD area via FR-126 and other roads would remain largely unchanged; however, the transmission line and ROW clearing would be visible from the lower portions of the Blind Canyon Trail. These impacts would occur in an area where one or more existing transmission lines and other existing man-made features have already affected the IRA's wilderness character, and in general, this area does not include the areas

[3] The Cedar Knoll IRA generally overlays the URUD area; however, there are approximately 6,000 acres of the Cedar Knoll URUD area that are outside of IRA boundaries.

offering the most solitude, due to the terrain, aspect, and lack of dense vegetation in conjunction with the existing sights and sounds of the Sanpete Valley.

Overall, the impacts associated with construction, operation, and maintenance would result in a small permanent loss of acres where the Project would cross the Cedar Knoll IRA/URUD area and would further diminish the natural appearance and undeveloped character of the outermost portion of the IRA/URUD area, which is in close proximity to roads and existing structures that have already compromised the wilderness characteristics of the area. Development of a second transmission line slightly further within the IRA would further degrade manageability in this area and may offer additional opportunities for unauthorized ORV use. Based on current mapping, the alignment would result in the segmentation of a 22-acre parcel (0.1 percent of the Cedar Knoll IRA, less than that for the URUD area) from the rest of IRA/URUD area; however, this segmented acreage includes the existing transmission line ROW, which has already fragmented this portion of the IRA/URUD area. The placement of the alignment would leave all but small portions (99.7 percent of Cedar Knoll IRA and URUD area) unfragmented and well over the requisite 5,000 acres, with minimal effect to manageability. The changes in the wilderness qualities would not be large enough to preclude management of the IRA/URUD area as a whole.

Application of **SDA-1** would further reduce modeled construction disturbance acreages within IRAs by eliminating construction staging areas/fly yards, material storage yards and batch plant sites within the IRA. Application of **SDA-2** would ensure any improved roads would be managed in alignment with the USFS Transportation Plan, and rehabilitated as appropriate. Application of **SDA-5** (use of Level 3 Selective ROW Clearance Based vegetation management methods) is proposed to further reduce vegetation, wildlife and visual operational impacts from ROW clearing. This would minimize impacts to the diversity of plants and animals within the IRAs and would reduce visual impacts in pinyon-juniper, mixed conifer and spruce communities or other vegetation types higher than six feet (see also **VR-1, VR-3, VR-4, VR5, VR-6, VR-9, VR-10, VR-11,** and **VR-12** in Section 3.12, Visual Resources). **SDA-6, SDA-7,** and **SDA-8** would reduce the amount and type of initial vegetation removal /disturbance and protect the area's vegetation to the maximum amount possible. **SDA-9** and **SDA-10** would provide a process for developing site-specific plans and ensuring appropriate reclamation and visual mitigations have taken place. **SDA-11** would ensure that chemical agents would not be used for ROW vegetation maintenance.

There is a small portion of the refined transmission corridor that is within the Cedar Knoll URUD area but not within the Cedar Knoll IRA. Modeled disturbance calculations estimate 2 acres of ROW vegetation removal, 10 acres of construction surface disturbance, and 7 acres of operations disturbance that may occur in the URUD area; most of this disturbance would be outside of the IRA. Application of **SDA-12** is proposed to extend the requirement for roadless construction techniques to any portion of an URUD area that is located outside of the IRA. Application of **SDA-13** is proposed to ensure that all applicable SDA mitigation is applied to URUD areas located both within and outside of IRAs. This would allow application of the mitigation measures identified above to URUD areas. Together, these proposed mitigations would reduce impacts by eliminating roads and staging areas in URUD areas, reducing visual impacts by allowing a greater diversity of vegetation within the ROW, and otherwise protecting wilderness characteristics.

National Monuments

Both the refined transmission corridor as well as the area in which roads or construction support areas could be located would be south of the Dinosaur National Monument visitor entrance from US-40 near Dinosaur, Utah, but would not encroach onto the Monument proper. Application of **SDA-1** would ensure that further refinements of the transmission line and associated access roads would not encroach onto the Dinosaur National Monument in this location.

National Historic Trails

There would be no impacts to NHTs.

Alternative II-B

Alternative II-B would cross the Old Spanish NHT. A small portion of the refined transmission corridor would encroach into the Oil Spring Mountain ACEC, and would be adjacent to the Demaree and Oil Spring Mountain WSAs, but would not encroach into these areas. The area outside the refined transmission corridor in which roads or construction support areas could be located would include 2 ACECs and portions of 2 IRA areas. Both the refined transmission corridor as well as the area in which roads or construction support areas could be located would be west of the McInnis Canyon NCA, but would not encroach onto the NCA.

BLM SDAs

Oil Spring Mountain WSA/ACEC. Within the BLM White River FO, a small portion of the refined transmission corridor (less than 1 acre) would pass through the 18,260-acre Oil Spring Mountain ACEC. This would be less than 0.001 percent of the SDA. Development would occur within a designated underground utility corridor west of the Oil Spring Mountain WSA, which is a ROW exclusion area, and project access may include the existing road that forms the WSA boundary. However, no development would occur within the WSA. The visual impacts to the WSA from operation of the line would not be mitigated, and a land use plan amendment would be required to change the designated use of the designated utility corridor to allow overhead transmission lines. The BLM White River FO has recommended that the WSA not be carried forward as wilderness, but rather designated as an ACEC. If released by Congress, the ACEC would be managed as a ROW avoidance area and closed to motorized vehicles to protect its relevant and important values, which include spruce-fir and biologically diverse plant communities, BLM sensitive species, and remnant vegetation associations (RVA). Application of **SDA-1** would ensure that all road and construction support area impacts to the WSA and the vegetation resources of the proposed ACEC are eliminated. Impacts from overland travel and other ancillary construction areas (or road construction, if the area is released by Congress) would be minimized through design features and agency BMPs, including surveys and avoidance of special status species and RVA habitat, as well as reclamation and monitoring activities.

White River Riparian ACEC. The refined transmission corridor also would enter into the 950-acre White River Riparian ACEC. The ACEC is a ROW avoidance area. Construction of roads within the ACEC would have potential impacts to the riparian areas and bald eagle roosts for which the ACEC was designated. As currently mapped, the alignment and 250-foot-wide transmission line ROW would not cross the ACEC, but the refined transmission corridor, which represents the maximum extent in which ROW shifts could occur, contains areas both within and outside of the ACEC. Modeled disturbance calculations estimate 4 acres of ROW clearing and 2 acres of construction surface disturbance within the ACEC, of which less than 1 acre would be permanent. These acreages assume that there is potential for some portions of ROW clearing, roads, and/or construction support areas to move into the ACEC as site-specific adjustments are made. All surface disturbances would be contingent upon avoidance of cottonwood communities, maintenance of utility as bald eagle habitat and properly functioning riparian community, and use of special reclamation techniques to accelerate recovery and reestablishment of habitat (BLM 1997b). Adherence to agency timing stipulations within a 0.5-mile buffer around roosts from November 15 to April 15 would minimize impacts to roosting eagles. TransWest commitments to Design Features and BMPs to avoid riparian areas and control erosion and sedimentation would further reduce impacts from overland construction and other disturbance. Application of **SDA-1** would eliminate road and construction support area impacts to the ACEC and **SDA-2** (full road reclamation) would further reduce risk if road construction could not be fully avoided. Application of **SDA-5** also is proposed to further reduce impacts to the bald eagle roosting area and cottonwood communities.

Demaree WSA. Within the BLM Grand Junction FO, the refined transmission corridor would adjacent to the 21,050-acre Demaree WSA. The 250-foot-wide transmission line ROW and refined transmission corridor would be located within a designated utility corridor that is along the boundary of the WSA, although the WSA is a ROW exclusion area. The refined transmission corridor, which represents the maximum extent in which ROW shifts could occur and where most roads and construction support areas would be located, contains areas adjacent to the WSA. Modeled disturbance calculations estimate 38 acres of ROW vegetation removal (less than 0.2 percent) and 19 acres of construction surface disturbance of construction surface disturbance for access roads, tower construction sites, communication sites, line stringing and tensioning sites, and other temporary work areas, of which approximately 3 acres would be permanent. TransWest's commitment to comply with agency stipulations (TWE-1) would entail siting the 250-foot-wide transmission line ROW outside of the WSA. This would eliminate all ROW vegetation clearing within the WSA. Application of **SDA-1,** which would restrict access to existing roads within all SDAs and eliminate the development of construction support areas within SDAs, would eliminate all construction surface disturbances within the WSA. The BLM Grand Junction RMP has recommended that the Demaree WSA not be carried forward as wilderness because of the loss of high potential oil and gas lands and coal deposits. If the area is released from wilderness consideration, the area would be managed as part of a coal-emphasis management area and designated as a ROW sensitive area. Development of a transmission line and access roads would not be incompatible with proposed management direction. Impacts from overland travel and other ancillary construction areas (or road construction, if the area is released by Congress) would be minimized through design features and agency BMPs, reclamation, and monitoring activities.

Badger Wash ACEC. The refined transmission corridor would not cross the 1,520-acre Badger Wash ACEC; however, there is potential for roads and other construction support sites to be constructed within the ACEC. The TransWest construction model identifies the potential for about 1 acre of construction surface disturbances to occur within the ACEC (less than 0.1 percent of the ACEC), of which less than 0.5 acre would be permanent. Application of **SDA-1**, which would restrict access to existing roads within all SDAs and eliminate construction supports areas within SDAs, would eliminate impacts to the sensitive plant species and to the portion of the ACEC used for hydrologic study, which has been designated as unsuitable for public utilities.

McInnis Canyons NCA. Both the refined transmission corridor as well as the area in which roads or construction support areas could be located would be west of the 123,430-acre McInnis Canyons NCA, but would not encroach into the NCA. Application of **SDA-1** would ensure that further refinements of the transmission line and associated access roads would not encroach onto the McInnis Canyons NCA in this location.

USFS IRAs and URUD Areas

The refined transmission corridor would not cross any USFS SDAs; however, the area in which roads or construction support areas may be located includes portions of two IRAs. These SDAs have been retained because they include existing access routes that TransWest proposes to use. Modeled disturbance calculations within the Boulger-Black Canyon IRA estimate about 1 acre of construction surface disturbance, most of which would be permanent. Modeled disturbance calculations within the East Mountain IRA estimate no ROW vegetation removal and about 1 acre of construction surface disturbance, most of which would not be permanent. Application of **SDA-1** and **SDA-2** would minimize surface disturbance impacts and ensure rehabilitation of any improved existing road within an IRA to pre-project conditions to protect the area's natural integrity. **SDA-8, SDA-9,** and **SDA-10** would provide a process for developing site-specific plans and ensuring appropriate reclamation has taken place.

National Monuments

There would be no impacts to National Monuments.

National Historic Trails

Alternative II-B would cross the Old Spanish NHT four times (see **Figure 3.15-11**), twice within the Book Cliffs AU (Moab FO) and twice within the San Rafael Swell AU (Price FO). The crossings all would be located on BLM land.

Book Cliff AU Crossings. Alternative II-B would cross the Book Cliff AU in the following locations:

- Forty miles east of the Town of Green River and less than 3 miles west of the community of Cisco. The crossing would be adjacent to I-70 on the north side of the highway. The segment that would be crossed is rated as NHT V and does not contribute to the trail's NRHP eligibility. There are no associated historic sites, recreation facilities, or interpretive features located the crossing. The Thompson Springs rest area would be located about 18 miles to the west of the crossing.
- Nine miles east of the Town of Green River. The crossing would be adjacent to I-70 in an area where the trail parallels a frontage road (Old Highway 6 and 50) to the north of the I-70. There are no associated historic sites or interpretive features located near trail segments in this area. The Crescent Junction rest stop would be located about 9 miles to the west. The portion of I-70 adjacent to the segment is part of the Dinosaur Diamond Prehistoric Byway. The proposed trail crossing would be located on BLM land within a designated utility corridor. The segment is rated as NHT II and is eligible for the NRHP.

The crossings would be in a designated utility corridor, but there are current no existing transmission lines in the corridor. Development would be consistent with area management but would result in the construction of linear feature with strong contrasts where none currently exists, which would reduce the scenic quality of the associated setting of the Old Spanish NHT. However, the scenic quality in this area is already low (Class C).

San Rafael Swell AU Crossings. Alternative II-B would cross the Book Cliff AU at two locations located approximately 7 and 8 miles west of the Town of Green River and 2 miles west of US-6, are part of The Green River Crossing to Big Flat Segment, are rated as NHT III and V, and are not eligible for the NRHP. The crossings would be in area of low scenic quality (Class C). There are no associated historic sites, recreation facilities, or interpretive features located near trail segments in this area (the watering places are located farther to the north).

The trail crossings would be in compliance with the BLM Price RMP stipulations as they would be located within a designated utility corridor. Towers would be placed to avoid surface disturbance near the actual trail. The crossings would be in a designated utility corridor, but there are current no existing transmission lines in the corridor. Development would be consistent with area management but would result in the construction of linear feature with strong contrasts where none currently exists, which would reduce the scenic quality of the associated setting of the Old Spanish NHT. However, the scenic quality in this area is already low (Class C).

Visibility Impacts. Alternative II-B would be visible from the Old Spanish NHT for approximately 58 miles of the trail. Of those 58 miles, approximately 7 miles of trail (4 segments) are categorized as NHT-II; approximately 6 miles of trail segments are categorized as NHT-III; approximately 27 miles of trail segments are categorized as NHT-IV; and, approximately 18 miles are categorized as NHT-V. All segments are considered to be High Potential. Three of the 10 trail segments that are within the viewshed are eligible for the NRHP.

Table 3.15-10 summarizes key features of trail segments that would be in the Alternative II-B viewshed.

Table 3.15-10 Alternative II-B Viewshed Impacts by Old Spanish NHT Analysis Unit

AU	Segment Rating	Number of Segments	Contributing Status	Miles of Trail within Viewshed[1]	Total Mileage within AU	Percentage of AU within Viewshed
Book Cliffs (Moab FO; 62 miles total)	Highest rating within AU (NHT-II and exceptional)	2	1 contributing segment	6.5	11	59
	Remaining mileage (NHT-III and IV; high potential)	5	No contributing segments	40.0	51	78
Blue Hills (Moab FO; 13 miles total)	Highest rating within AU (NHT-II; exceptional/ notable)	1	1 contributing segment	0.6	3	20
	Remaining mileage (NHT-III and IV; high potential)	2	1 contributing segment	0.7	10	7
San Rafael Swell (Price FO; 58 miles total)	Highest rating within AU (NHT-II; notable)	1	1 contributing segment	0.2	15	1
	Remaining mileage (NHT III, IV-VI; high potential)	3	No contributing segments	11.0	43	16

[1] Visibility of Alternative II-B from the historic trail is based on the 5-mile viewshed.
[2] Two segments not evaluated.

Within the BLM Moab FO, Alternative II-B would have impacts within the Book Cliffs and Blue Hills AUs. Within the Book Cliffs AU, selection of Alternative II-B would result in visual impacts to about 47 miles (75 percent) of the 62 miles of inventoried trail within the AU. This includes 6.5 miles of trail that is rated as NHT-II/Exceptional (59 percent of the highest rated mileage within the AU). The remaining 40 miles of inventoried trail within the viewshed comprise trail segments that are considered to be High Potential. Affected mileage constitutes 78 percent of High Potential segments within the AU. Two of the seven trail segments within the viewshed are eligible for the NRHP.

The far eastern portion of the Book Cliffs AU, which currently has a Class B (average) scenic rating, would not be in the transmission line viewshed. The central and western portions of the Book Cliffs AU would be in the transmission line viewshed. While transmission line alignment would introduce a linear feature with strong contrasts where none currently exists; scenic quality is low (Class C) , and the integrity of the historic setting of the Old Spanish NHT trail is already diminished where it is adjacent to I-70 and railroad features. There are no associated historic sites located near affected trail segments in this area. Recreationally important landscapes within the Book Cliffs AU include the Cisco Desert area and the Green River area. Several recreation facilities (the Thompson Springs rest stop, the hiking trail near Thompson Springs, the Crescent Junction rest stop, portions of the Dinosaur Diamond Prehistoric Byway and northernmost portions of the Labyrinth Canyon SRMA would be within immediate foreground (0.0 to 0.5-mile) visibility of the transmission line. None of these recreational areas currently offer interpretive materials related to the Old Spanish NHT.

Selection of Alternative II-B would result in visual impacts to about 1 mile (10 percent) of the 13 miles of inventoried trail within the Blue Hills AU. This would include 0.6 mile of trail that is rated as NHT-II/Exceptional-Notable (20 percent of the highest rated mileage within the AU). The remaining affected mileage would be comprised of trail segments that are considered to be High Potential. Affected mileage would constitute 7 percent of High Potential segments within the AU. Two of the three trail segments within the viewshed are eligible for the NRHP. There are no associated historic sites located near affected trail segments in this area. The transmission line would be visible in the portions of the AU closest to the I-70 corridor; however, the scenic quality classification would not change. Two nearby recreation facilities (the northern edge of the Labyrinth Canyon SRMA and portions of the Dinosaur Diamond Prehistoric Byway) would be within immediate foreground (0.0 to 0.5-mile) visibility of the transmission line. Neither of these areas currently offer interpretive materials related to the Old Spanish NHT.

Within the BLM Price FO, selection of Alternative II-B would result in visual impacts to about 11 miles (20 percent) of the 58 miles of inventoried trail within the San Rafael Swell AU. This includes 0.2 mile of trail that is rated as NHT-II/Notable (1 percent of the highest rated mileage within the AU). The remaining affected mileage would be comprised of trail segments that are considered to be High Potential. Affected mileage constitutes 16 percent of High Potential segments within the AU. One of the four trail segments within the viewshed is eligible for the NRHP. Impacts would be confined to segments closest to the US-6 corridor. This includes some of the higher rated trail segments within the BLM Price FO, but would not include nearby associated historic sites and current scenic quality classifications (Class B) would not change.

Overall, these impacts would not preclude development of a management corridor for the Old Spanish NHT since the affected acreage comprises a small amount of the Old Spanish NHT and development of a transmission line would conform with existing management. Development of Alternative II-B may reduce opportunities for protection or interpretation of high value sites within the San Rafael Swell AU, since the viewshed would include some of the higher rated trail segments within the Price FO.

Mitigation identified in Section 3.12, Visual Resources, includes measures to reduce visual impacts through the use of BLM environmental colors and location of structures, roads, and other project elements as far back from road, trail, and river crossings as possible, and, where feasible, employ terrain and vegetation to screen views from crossings.

Alternative II-C

Alternative II-C would pass through the Oil Spring Mountain ACEC, the Browns Hole URUD area, and would cross the Old Spanish NHT. The refined transmission corridor also would include portions of one ACEC not crossed by the alignment. The area outside the refined transmission corridor in which roads or construction support areas could be located include three additional ACECs and would be adjacent to the Oil Spring Mountain and Demaree WSAs as well as one NCA.

BLM SDAs

Impacts to the Demaree WSA, Oil Spring Mountain WSA and ACEC, White River Riparian ACEC, Badger Wash ACEC and McInnis Canyon NCA would be the same as under Alternative II-B as the route would be the same.

San Rafael Canyon ACEC. While not crossed by the refined transmission corridor, the area outside this corridor in which some roads and construction support areas could occur would include portions of the San Rafael Canyon ACEC (BLM Price FO). Modeled disturbance calculations estimate 4 acres of construction surface disturbances would occur within the 15,200 San Rafael Canyon ACEC (less than 0.1 percent of the ACEC), of which 1 acre would be permanent. The ACEC is designated for scenic values and managed as a ROW avoidance area, excluded from land treatments unless used to protect or improve riparian values. OHV use is limited to designated roads. As currently mapped, the alignment and the 250-foot-wide transmission line ROW would be co-located with existing steel lattice transmission lines outside of the ACEC and would comply with BLM VRM for the area (Section 3.12, Visual Resources). TransWest commitments to avoid riparian areas would reduce impacts to ACEC values; however, the development of roads would reduce the scenic qualities for which the ACEC was designated. Application of **SDA-1**, which would restrict access to existing roads and eliminate construction supports areas within all SDAs, would eliminate these impacts.

Rock Art ACEC. The area outside the refined transmission corridor in which some roads and construction support areas could be located also would include the Dry Wash and Molen Seep units of the Rock Art ACEC (BLM Price FO). The Rock Art ACEC is a regionally important area with some of the best examples of prehistoric rock art in the Colorado Plateau. The ACEC is managed to protect cultural resource values and is designated as a ROW exclusion area outside of designated utility corridors.

Modeled disturbance calculations estimate the potential for less than 0.5 acre of construction surface disturbances to occur within the Dry Wash and Molen Seep units, of which only a fraction would be permanent. These areas would not be located within designated utility corridors; development of roads or construction support areas would not be in conformance with area management objectives and could result in destruction of cultural resources as well as increased vandalism due to increased access. Application of **SDA-1** would eliminate these impacts.

USFS IRAs and URUD Areas

*Browns Hole URUD Are*a. Within the Fishlake National Forest, approximately 6 miles of the alignment and refined transmission corridor would cross the 8,212-acre Browns Hole URUD area (see **Appendix H** for more information on the existing condition of the IRA). The proposed alignment and 250-foot-wide transmission line ROW would pass through the middle of the URUD area, essentially bisecting it into two URUD areas that are both less than the requisite 5,000 acres needed for future IRA designation and compromising the USFS's ability to manage for the area for roadless or wilderness qualities in the future.

There is no specific management restriction precluding road development in URUD areas outside of IRAs, provided the appropriate Standard and Guidelines are met. Construction disturbances within the Brown Hole URUD area would include clearing the 250-foot-wide transmission line ROW vegetation, constructing access roads, and developing structure work areas and wire-pulling, tensioning and splicing sites associated with the construction of 24 to 48 towers (6 miles of alignment). Modeled disturbance calculations estimate 230 acres of ROW vegetation removal (3 percent of the URUD area), 116 acres of construction surface disturbance and 20 acres of operations disturbance within the URUD area. These acreages assume that there is potential for some portions of ROW clearing, tower sites, roads, and/or construction support areas to move outside of the URUD area as site-specific adjustments are made. If the 250-foot-wide transmission line ROW does not shift from its current mapped location, approximately 198 acres (2 percent) of the URUD area would be subject to ROW vegetation removal and/or surface disturbance.

Establishment of the structure work areas and overland access within the 250-foot-wide transmission line ROW or refined transmission corridor for construction vehicles and equipment may alter and/or disrupt natural drainage patterns and contribute to sedimentation of waterways in the area. TransWest would apply Design Features and BMPs to minimize vegetation removal and avoid root damage (and reduce sedimentation to protect water resources within the URUD area (see TWE-11, TWE-26 through 28, and TWE-8, TWE-19, TWE-22, among others) and would develop vegetation and noxious weed management plans to reduce impacts to natural integrity of the URUD area. TransWest also would span sensitive resources (such as threatened and endangered habitat, cultural resources, wetlands, etc., see **Appendix C** for a full list of design features) to reduce resource impacts. After construction is complete, work areas would be re-contoured to reestablish any altered natural drainage patterns. Areas used for overland access would be restored as necessary.ROW vegetation would be reestablished in accordance with USFS seed mix requirements and in accordance with TransWest's vegetation management practices. The reestablished vegetation would reduce effects from erosion or sedimentation, but ROW vegetation may not ever return to the original vegetation communities and standard ROW vegetation management of up to 230 acres would continue for the life of the project.

During construction, the sights and sounds of construction along the ROW would be seen or heard through much of the URUD area and would add to the human influence on conditions within the URUD area. Construction disturbance areas within the URUD area would be in areas designated as RN and SPM ROS. These ROS classes are managed to allow moderate evidence of sights and sounds of human activity but may be modified by roads or recreation facilities. Transmission line construction would be beyond expected conventional motorized use, but impacts from construction noise, traffic, and other activities would be temporary (see Section 3.13, Recreation Resources, for more information about ROS).

Once constructed within the URUD area, establishment of tower sites, structure work areas, and access routes would add to the human influence in the area. The transmission line and ROW clearing would be visible in approximately 80 percent of the Browns Hole URUD area. This includes 96 percent (4,080 acres) of all SPM areas (the most natural portions of the URUD) and all non-motorized trail mileage within the URUD area. At least 3 miles of the Dead Horse Canyon trail would be near or directly underneath the transmission line. The transmission line also would cross Maple Spring Canyon Trail. The overall feelings of remoteness within these portions of the URUD may be reduced, although this URUD area already experiences the sights and sounds of I-70 and another transmission line already crosses the southern part of the URUD area. Access for visitors to the URUD area would remain largely unchanged. Effects from maintenance activities (vegetation management, line inspection) would largely be limited to the ROW. During these limited activities; personnel, vehicles, helicopters (potentially), and equipment could be seen and heard.

Application of **SDA-12** would require application of roadless construction techniques within URUD areas and application of **SDA-13** would require other SDA mitigations to be applied to URUD areas. This includes **SDA-1** (which would eliminate all portions of the refined transmission corridor within the URUD area from use for access roads or staging areas), **SDA-2** (which would require rehabilitation of existing roads); **SDA-5** (Level 3 vegetation management techniques requirements), **SDA-6** through **SDA-8** (procedures for reducing surface disturbance and protecting wilderness characteristics), **SDA-9** and **SDA-10** (processes for developing site-specific plans and ensuring appropriate reclamation and visual mitigations) and **SDA-11** (prohibitions against the use of chemical agents for ROW vegetation maintenance). These mitigation measures would further reduce impacts to wilderness qualities within the URUD area by eliminating roads and staging areas in URUD areas; minimizing disturbance to wildlife habitat and the diversity of plants and animals from vegetation clearing and allowing a greater diversity of vegetation within the ROW; and minimizing visual impacts to the URUD area from vegetation maintenance, particularly within pinyon juniper communities and other vegetation types between 6 feet and 29 feet in height (Section 3.12, Visual Resources). However, the visual impacts from the transmission line itself would not be mitigated and the linear intrusion through the middle of the URUD area would degrade the naturalness and undeveloped nature of this portion of the URUD, would still pose a manageability issue, and would fragment the URUD area.

National Monuments

There would be no impacts to National Monuments.

National Historic Trails

Alternative II-C would cross the Old Spanish NHT a total of 11 times—7 times on BLM lands (2 times within the Book Cliffs AU and 5 times within the San Rafael Swell AU) and 4 times on NFS lands within the Manti-La Sal National Forest.

Book Cliffs AU Crossings. The two Book Cliffs AU crossings would be the same as under Alternative II-B. Impacts would be identical.

San Rafael Swell AU Crossings. Two of the five San Rafael Swell AU crossings would be the same as discussed for Alternative II-B. The third crossing within the San Rafael Swell AU would be located 14 miles east of Castle Dale and adjacent to CR 401. The fourth and fifth crossings would be located on portions of the alternative between Ferron and Emery, Utah. All three proposed trail crossings would be located on BLM land and would be within designated utility corridors. The trail segments that would be crossed are rated as NHT-V and are not eligible for the NRHP. Towers would be placed to avoid surface disturbance near the actual trail. Alternative II-C also would cross four trail segments within the Fishlake National Forest. These crossings would be located south of I-70 about 20 miles southwest of Salina, near the Gooseberry/Fremont Road Scenic Backway. These segments were not evaluated as part of the 2012 NHT Inventory Report for NHT Condition Category, scenic quality, or overall setting.

Alternative II-C would be visible from the Old Spanish NHT for approximately 108 miles of the trail. Of those 108 miles, approximately 17 miles of trail segments are categorized as NHT II; approximately 8 miles of trail segments are categorized as NHT III; approximately 31 miles of trail segments are categorized as NHT IV; and approximately 27 miles are categorized as NHT V. There also would be 25 miles within the Manti-La Sal National Forest that are unevaluated. **Table 3.15-11** summarizes key features of trail segments that would be in the Alternative II-C viewshed.

Viewshed Impacts. Within the BLM Moab FO, selection of Alternative II-C would result in the same viewshed impacts to the Book Cliffs and Blue Hills AUs as discussed for Alternative II-B. Within the BLM Price FO, selection of Alternative II-C would result in viewshed impacts to about 36 miles (62 percent) of the 58 miles of inventoried trail within the San Rafael Swell AU. This would include 10 miles of trail that is rated as NHT-II/Notable (67 percent of the highest rated mileage within this AU). The remaining 26 miles comprise trail segments that are considered to be High Potential. Affected mileage constitutes 60 percent of High Potential segments within the AU. One of the five trail segments within the viewshed is eligible for the NRHP. Impacts would be confined to segments closest to the US-6 corridor. There are no associated historic sites located near affected trail segments in this area and the current scenic quality is already low (Class C).

Table 3.15-11 Alternative II-C Viewshed Impacts by Old Spanish NHT Analysis Unit

AU (location)	Segment Rating	Number of Segments	Contributing Status	Miles of Trail within Viewshed[1]	Total Mileage within AU	Percentage of AU within Viewshed
Book Cliffs (BLM Moab FO; 62 miles total)	Highest rating within AU (NHT-II; exceptional)	2	1 contributing segment	6.5	11	59
	Remaining mileage	5	No contributing segments[2]	40	51	78
Blue Hills (BLM Moab FO; 13 miles total)	Highest rating within AU (NHT-II; exceptional)	1	1 contributing segment	0.6	3	20
	Remaining mileage	2	1 contributing segment	0.7	10	7
San Rafael Swell (BLM Price FO; 58 miles total)	Highest rating within AU (NHT-II; notable)	1	1 contributing segment	10	15	67
	Remaining mileage	4	No contributing segments	26	43	60
Fishlake National Forest/Private	N/A	N/A	Unknown	25	N/A	N/A

[1] Visibility of Alternative II-B from the historic trail is based on the 5-mile viewshed.

[2] Two segments not evaluated.

Alternative II-C generally would parallel an existing transmission line in portions of the San Rafael Swell AU specific to Alternative II-C. Recreationally important landscapes include the Wedge Overlook and the Little Cedar Mountain RA. The Wedge Road visitor station and the Little Cedar Mountain RA would be about 3 miles to the west of the trail crossing. Portions of the San Rafael Swell and Wedge Overlook/Buckhorn Dr. Scenic Backway would be within the immediate foreground (0 to 0.5-mile) visibility of the transmission line. None of these areas currently offer interpretive materials related to the Old Spanish NHT, although there are several trail location signs in several locations along CR-401. Development of Alternative II-C may reduce opportunities for future trail interpretation in these areas.

Impacts would not be mitigated by transmission line siting adjustments within the refined transmission corridor because the transmission line would still be within the viewshed of this portion of the AU.

Within the Fishlake National Forest, Alternative II-C would be within the viewshed of 25 miles of unrated trail. There are no associated historic sites located near affected trail segments in this area. One recreational area that would be near or within the viewshed would be the Gooseberry/Fremont Road Scenic Backway. No scenic quality ratings are available for this area, but adjacent BLM areas are rated as Class C (low). Impacts would not be mitigated by transmission line siting adjustments within the refined transmission corridor because the transmission line would still cross the trail at some point.

Mitigation identified in Section 3.12, Visual Resources, includes measures to reduce visual impacts through use of BLM environmental colors and location of structures, roads, and other project elements as far back from road, trail, and river crossings as possible, and, where feasible, employ terrain and vegetation to screen views from crossings.

Overall, these impacts would not preclude development of a management corridor for the Old Spanish NHT since the affected acreage comprises a small amount of the Old Spanish NHT and development of a transmission line would be consistent with existing management. Development of Alternative II-C may reduce opportunities for effective management, protection or interpretation of Old Spanish NHT within the San Rafael Swell AU since the viewshed would include some of the higher rated trail segments within the BLM Price FO and as well as the Wedge Overlook/Buckhorn Drive Scenic Backway and the visitor center located at the junction of Wedge Road and CR-401, which could serve locations for future interpretive sites.

Alternative II-D

Alternative II-D would cross the Lower Green River Corridor ACEC and the Lower Green River WSR. The refined transmission corridor would include a very small portion of one IRA. The area outside the refined transmission corridor in which roads or construction support areas could be located would include one additional ACEC and would be south of one national monument. There would be no impacts to NHTs.

BLM SDAs

Within the BLM Vernal FO, approximately 1 mile of the alignment and refined transmission corridor would cross the Lower Green River within a designated utility corridor. This would affect both the Lower Green River Corridor ACEC and the Lower Green River WSR. The Lower Green River is managed as NSO for oil and gas (which equates to a ROW avoidance area). An exception exists to allow utilities to cross the Lower Green River corridor within the existing utility corridor at Four Mile Bottom; however, this designated utility corridor is not currently exempted from ACEC management objectives in the Vernal RMP (AECOM unpublished).

Lower Green River Corridor ACEC. The 8,470-acre Lower Green River Corridor ACEC is managed as a designated ROW avoidance area for protection of riparian and special status species habitat and scenic values. As currently mapped, the alignment, 250-foot-wide transmission line ROW, and refined transmission corridor would be located within the ACEC and within the designated utility corridor at Four Mile Bottom. Modeled disturbance calculations estimate 15 acres of ROW vegetation removal (0.2 percent of the ACEC), 13 acres of construction surface disturbance, and 3 acres of operations disturbance within the ACEC. These acreages assume that there is potential for some portions of ROW clearing, tower sites, roads, and/or construction support areas to move outside of the ACEC as site-specific adjustments are made. If the 250-foot-wide transmission line ROW does not shift, approximately 0.2 percent of the ACEC (18 acres) would be subject to ROW vegetation removal and/or surface disturbance. Agency buffers and TransWest's commitment to avoid riparian areas and special status species habitat would reduce impacts to riparian and special status plant species values; soil and water BMPs would reduce erosion and sedimentation that could affect special status species fish. Although the ACEC is managed as VRM Class II, designated utility corridors are exempted from meeting VRM standards as specified in Appendix K of the RMP. Nonetheless, the viewshed of the transmission line

would affect the scenic values for which the ACEC was designated (see Section 3.12 for more discussion about impacts to visual resources). Application of **SDA-1, SDA-2**, and **SDA-3** are proposed to reduce impacts to the ACEC by limiting new roads and construction support facilities within the SDA to within the designated utility corridor and/or reducing or eliminating roads and construction support facilities altogether within the SDA. Application of **SDA-5** (use of Level 3 vegetation management methods) is proposed to further reduce the visual impact from ROW clearing and maintenance within the ACEC. Selective removal of cottonwood trees along the river would reduce visual impacts, but the presence of a transmission line would be a permanent impact to the high value scenery of the ACEC. A land use plan amendment is being proposed to exempt the designated utility corridor from ACEC management objectives (see Chapter 4.0). If adopted, the Project would be consistent with the BLM Vernal RMP.

Lower Green River WSR. A 30-mile segment of the Lower Green River has been determined to be suitable for WSR "scenic" designation based on the outstandingly remarkable values of recreation and fish. The WSR segment also is managed as VRM Class II; however, as noted above, designated utility corridors are exempted from meeting VRM standards as noted in Appendix K of the Vernal RMP. Modeled disturbance calculations estimate that ROW vegetation clearing would occur on approximately 14 acres of the 11,968-acre WSR area (0.1 percent of the WSR) and there would be up to 12 acres of construction surface disturbance (the majority of which would occur in the same area as ROW vegetation clearing) that could affect special status species habitat and scenic values within the WSR area. Approximately 4 acres of surface disturbance would be permanent. These acreages assume that there is potential for some portions of ROW clearing, tower sites, roads, and/or construction support areas to move outside of the suitable area as site-specific adjustments are made. If the 250-foot-wide transmission line ROW does not shift from its current mapped location, approximately 19 acres would be subject to ROW vegetation removal and/or surface disturbance (0.2 percent of the WSR). Soil and water BMPs would reduce sedimentation that could affect special status species fish, thereby protecting this outstandingly remarkable value. The ourstandingly remarkable values of recreation, which includes canoeing, fishing, hunting, waterfowl viewing, floating and camping activites, would remain; however, the setting in which these activities take place would be affected by the presence of a transmission line. This impact would represent a degradation of the "attractive pastoral setting" that was included in the description of the outstandingly remarkable value of recreation (see Section 3.15.4.5), and the presence of a transmission line would not be consistent with the criteria for a "scenic" designation (largely primitive and undeveloped, no substantial evidence of human activity, etc.). Section 3.12, Visual Resources, provides additional information regarding the visual impacts to this area. The 250-foot-wide transmission line ROW would be located within a designated utility corridor, the RMP provides an exception for utilities to cross the WSR at the Four Mile Bottom area, and the RMP exempts designated utility corridors from meeting VRM standards. However, a land use plan amendment is being proposed to change the tentative classification of the river in the Four Mile Bottom area utility corridor from "scenic" to "recreational" (see Chapter 4.0). If adopted, the visual impacts of the Project would be consistent with this tentative classification. Application of **SDA-1, SDA-2**, and **SDA-3** is proposed to eliminate impacts from road and construction staging areas outside of the designated corridor and reduce the long term impacts of road development within the designated utility corridor portion of the WSR. Application of **SDA-5** (use of Level 3 vegetation management methods) would reduce the visual impact from ROW clearing and maintenance, through selective removal of cottonwood trees along the river, but the presence of a transmission line would be a permanent impact to the high value scenery of the WSR. Application of **SDA-13** would further minimize surface disturbances and visual impacts to the WSR; however, the visual impacts from operation of the line would not be fully mitigated.

Lears Canyon ACEC. As currently mapped, the alignment would not cross the 1,377-acre Lears Canyon ACEC, but the refined transmission corridor, which represents the areas in which ROW shifts may occur, includes portions of the ACEC, and as currently mapped, the 250-foot-wide transmission line ROW (where vegetation clearing and most surface disturbance would occur) would be partially within the ACEC. Lears Canyon is managed as a ROW avoidance area for protection of relict vegetation; it is

closed to motorized travel and managed as VRM Class II. Modeled disturbance calculations estimate less than 0.1 acre of ROW clearing, and less than 0.1 acre of construction surface disturbance within the ACEC, a fraction of which would be permanent. These acreages assume that there is potential for some portions of ROW clearing, tower sites, roads, and/or construction support areas to move in or out of the ACEC as site-specific adjustments are made. If the 250-foot-wide transmission line ROW does not shift from its current mapped location, approximately 8 acres (less than 1 percent) of the ACEC would be subject to ROW vegetation removal and/or surface disturbance. TransWest commitments for key species habitat avoidance would reduce the impacts of road development on the plant habitat for which the ACEC was designated; however, visual impacts would remain and the Project would not be consistent with VRM Class II (see Chapter 4.0, for proposed Land Use Plan amendments relating to visual quality objectives). Application of **SDA-1, SDA-2**, and **SDA-3** is proposed to eliminate impacts from road and construction staging areas and reduce the long term impacts of road development. Application of **SDA 5** is proposed to reduce visual impacts and further protect relict vegetation. This mitigation measure would be effective in reducing visual impacts from ROW clearing in pinyon–juniper communities and other vegetation communities over 6 feet in height, with understory (Section 3.12, Visual Resources).

Nine Mile Canyon ACEC. There also is potential for road and construction support site construction within the 74,302-acre Nine Mile Canyon ACEC. The ACEC is managed as a ROW avoidance area for protection of cultural resources and special status species. The TransWest construction model identifies the potential for about 6 acres of construction surface disturbances to occur within the ACEC (less than 0.01 percent of the ACEC), of which approximately 3 acres would be permanent. The area in which the construction disturbances would occur would be located above the rim of the canyon, in an area managed as VRM Class III. The BLM's avoidance buffer and TransWest commitments for special status species habitat avoidance would reduce the impacts of road development on the plant habitat for which the ACEC was designated. Application of **SDA-1, SDA-2**, and **SDA-3** is proposed to eliminate impacts from road and construction staging areas and reduce the long-term impacts of road development to the cultural resources within the ACEC. If road development could not be avoided, impacts to cultural resources would be mitigated through compliance with the Cultural Resources PA developed for the Project.

USFS IRAs and URUD Areas

IRA 401009. Within the Ashley National Forest, the refined transmission corridor also would include about 1 acre of IRA 401009. As currently mapped, the alignment and 250-foot-wide transmission line ROW would not cross the IRA but the refined transmission corridor would include portions of the IRA in areas where TWE plans to use existing access roads. Modeled disturbance calculations estimate no ROW vegetation removal and less than 0.1 acre of construction surface disturbance, none of which would be permanent. Application of **SDA-1** would eliminate these impacts. Application of **SDA-2** would require rehabilitation of any improved existing road within an IRA to pre-project conditions to protect the area's natural integrity. **SDA-9** and **SDA-10** would provide a process for developing site-specific plans and ensuring appropriate reclamation has taken place.

National Monuments

Impacts to the Dinosaur National Monument would be the same as Alternative II-A.

National Historic Trails

There would be no impacts to NHTs.

Alternative II-E

Alternative II-E would cross IRA 401010 and Cedar Knoll IRA/URUD area, and the refined transmission corridor also would include portions of IRA 401011. The area outside the refined transmission corridor in

which roads or construction support areas could be located would include one IRA and be south of one national monument. Alternative II-E would not affect any NHTs or BLM-designated ACECs.

USFS IRAs and URUD Areas

Impacts to the Cedar Knoll IRA/URUD area would be the same as under Alternative II-A as the routes are identical.

IRA 401010/Sowers Canyon East URUD Area and IRA 401011/ Cottonwood Canyon URUD Area.
Within the Ashley National Forest, the alignment and refined transmission corridor would be located within an approximately 15-mile-long, narrow canyon (Sowers Canyon) between IRA 401010/Sowers Canyon East URUD (to the east) and IRA 401011/Cottonwood Canyon URUD (to the west). As currently mapped, the alignment would cross 9 miles of the 21,869-acre IRA 401010 and 17,028-acre Sowers Canyon East URUD area, but would not cross the 30,039-acre IRA 401011 or the 25,989-acre Cottonwood Canyon URUD area. However, the refined transmission corridor (which represents the area in which ROW shifts could take place) would include portions of both IRA/URUD areas, as well as areas outside of either IRA/URUD area (Sowers Canyon Road is excluded from both IRA/URUD areas; see **Figure 3.15-14**). The route would follow an existing transmission line and a creek for the entire distance; a cherry stem road originating from the north also would be adjacent to the route for all but about 3 miles. The proposed transmission line would be within a designated utility window.

Modeled disturbance calculations estimate 51 acres of ROW vegetation clearing (0.2 percent of the IRA), 29 acres of construction surface disturbance, and 3 acres of operations disturbance within IRA 401010, and 48 acres of ROW vegetation clearing (0.3 percent of the URUD area), 28 acres of construction surface disturbance, and 3 acres of operations disturbance within the Sowers Canyon East URUD area. These acreages assume that there is potential for some portions of ROW clearing, tower sites, roads, and/or construction support areas to move outside of the IRA/URUD area as site-specific adjustments are made. If the 250-foot-wide transmission line ROW does not shift, approximately 267 acres within the IRA 401010 and 248 acres within Sowers Canyon East URUD area would be subject to ROW vegetation clearing and/or surface disturbances. This is approximately 1 percent of the IRA and URUD area. Within IRA 401011 and the Cottonwood Canyon URUD area, modeled disturbance calculations estimate 42 acres of ROW vegetation clearing (0.1 percent of the IRA), 29 acres of construction surface disturbance, and 4 acres of operations disturbance within the IRA, and 31 acres of ROW vegetation clearing (0.1 percent of the URUD area), 18 acres of construction surface disturbance, and 2 acres of operations disturbance within the URUD area. If the 250-foot-wide transmission line ROW does not shift, there would be less than 1 acre within IRA 401010 and the Cottonwood Canyon URUD area that would be subject to ROW vegetation clearing and/or surface disturbances.

As discussed under Alternative II-A (see Chipman Creek IRA and Cedar Knoll IRA/URUD area discussions), construction disturbances within the IRAs would be generally limited to ROW vegetation clearing and development of structure work area and wire-pulling, tensioning and splicing sites associated with the tower construction. Construction of Alternative II-E would require approximately 36 to 54 towers (9 miles of alignment) along Sowers Canyon Road, adjacent to or within IRA 401010, but with the potential for some tower locations to occur within IRA 401011. These activities could alter natural vegetation processes where overstory vegetation is removed, potentially altering the understory vegetation. TransWest would span sensitive resources (such as threatened and endangered habitat, cultural resources, wetlands, etc. to reduce resource impacts; see TWE-25, TWE-29, TWE-31, TWE-32, and TWE-34, among others).Establishment of the structure work areas and overland access within the refined transmission corridor for construction vehicles and equipment needed at the sites may alter and/or disrupt natural drainage patterns and contribute to sedimentation of waterways in the area. The requisite separation distances from the existing transmission line could result in the transmission line being located on steeper side slopes, resulting in increased potential for erosion and sedimentation. There is one impaired stream that would be located within the refined transmission corridor (Sowers

Creek) and water within both IRAs contributes to the Duchesne River instream flows and supplies spring and pond water for grazing. TransWest would use Design Features and BMPs to reduce sedimentation to protect water resources within the IRA (see TWE-11, TWE-26 through TWE-28, and TWE-8, TWE-19, TWE-22, among others). Additional mitigation also has been proposed for protection of these resources, including surveys, avoidance and/or agency-approved crossing methods (see **WET-1, WET-2,** and **WET-3**). Both IRA/URUD areas provide high value winter range for deer and elk, summer habitat for pronghorn, big game migration corridors and contain sage-grouse brood rearing, occupied, and winter habitat. TransWest would be required to maintain agency-stipulated wildlife buffers and timing restrictions; see **Appendix C** for a full list of design features. Application of design features in **Appendix C** (specifically the development of vegetation and noxious weed management plans to address plant removal), and reclamation consistent with agency permitting stipulations for soils, water, vegetation and wildlife also would reduce impacts to habitat and wildlife throughout the area. After construction is complete, areas used for overland access would be restored as necessary and work areas would be re-contoured to reestablish any altered natural drainage patterns; however, ROW vegetation may not ever return to the original vegetation communities and standard ROW vegetation management of up to 267 acres for IRA 401010 and 42 acres of IRA 401011 would continue for the life of the project.

Construction disturbance areas within both IRAs would occur in areas designated as RN ROS. Activities would be beyond the conventional motorized use expected in these areas (see Section 3.13, Recreation Resources, for more information on ROS), but impacts from construction noise, traffic along Sowers Canyon Road, and other activities would be temporary. Visitor access to the IRA via Sowers Canyon Road could be temporarily affected. Within IRA 401010, affected area would include much of Trail 101 in Clem Hollow. In IRA 401011, access to the SPNM ROS class areas in the upper elevations of the IRA via the Quitchampau Trail may be impinged during construction and the sights and/or sounds of construction would be apparent on the lower half of the trail.

Once constructed within the IRA, the transmission line and cleared ROW would be apparent to visitors from 52 percent of IRA 401010 and 24 percent of IRA 401011. The project would be consistent with VQO modification management objectives. Scenic Quality would remain unchanged for Class B and C SQRUs; the portions of the IRA 401010 that are Class A would be reduced to Class B (visual impacts and proposed mitigation are discussed in greater detail in Section 3.12). It is important to note that this viewshed is the result of transmission line placement both outside of and inside the IRA and that it does include areas that are already within the viewshed of the existing transmission line. However, the viewshed of the proposed transmission line would be likely larger than the area currently affected by the existing transmission line (due to alignment placement and an increased structure height). Within IRA 401010, the viewshed would include 66 percent (4,541 acres) of the IRA's SPNM areas (the most primitive ROS class in the IRA), and 33 and 69 percent of SPM and RN areas, respectively. The majority of Clem Hollow Trail would have views of the transmission line and ROW clearing. Within IRA 401011, the viewshed would largely affect RN and SPM areas of the IRA (35 and 26 percent, respectively), but would include 11 percent of SPNM areas on the east side of the IRA. The lower half of the Quitchampau Trail would be within the Project viewshed, and the Mill Hollow Trail also would have views of the transmission line and ROW clearing. Access for visitors to the IRAs via Sowers Canyon Road and other roads would remain largely unchanged; however, recreation values along Sowers Canyon Road may become dominated by transmission lines since the existing transmission line already influences views along this area and due to the larger relative scale of the Project, would further define this area as a transmission line corridor. Both the existing and proposed transmission line corridor would be within a designated utility window; however, and thus in conformance with the Forest Plan.

The area along Sowers Canyon Road is already difficult to manage due to edge effects from forest road intrusions and motorized travel along the Sowers Canyon Road and development of a transmission line in this area could further degrade manageability of IRA 401010 and/or 401011. However, based on current ROW location, both IRAs would still be well over 5,000 acres and over 99 percent unfragmented.

It also is important to note that portions of the refined transmission corridor within IRA 401011 would not be within the USFS designated Cottonwood URUD area (the boundaries of which represents USFS's best information regarding areas with potential wilderness qualities or attributes). Overall, the impacts associated with construction, operation, and maintenance would result in a permanent loss of acres where the Project would cross the IRAs and would diminish the natural appearance and undeveloped character of portions of IRA 401010/Sowers Canyon East URUD area and IRA 401011/Cottonwood Canyon URUD area. Although the wilderness characteristics of the area have already been affected by existing man-made features and linear facilities present in the LRMP-designated utility window, the viewshed of the Project and opportunities for solitude and primitive recreation are primarily in other portions of the IRA. Any changes in the wilderness qualities would not be large enough to preclude management of the overall area as IRAs and/or wilderness.

Application of **SDA-1** is proposed to reduce construction disturbance acreages within IRA 401010 and 401011 by eliminating construction staging areas/fly yards, material storage yards and batch plant sites within the IRA. Application of **SDA-2** would require rehabilitation of any improved existing road within an IRA to pre-project conditions to protect the area's manageability. Application of **SDA-5** (use of Level 3 Selective ROW Clearance Based vegetation management methods) is proposed to further reduce vegetation, wildlife and visual operational impacts from ROW clearing. This would minimize impacts to the diversity of plants and animals within the IRAs and would reduce visual impacts in pinyon-juniper, Douglas-fir and aspen and other communities with vegetation heights greater than 6 feet, with understory. In areas where vegetation is taller than 30 feet and there is no understory, this vegetation management would not be effective in reducing sharp contrasts from the ROW clearing. Section 3.12, Visual Resources, also includes additional mitigation for areas that are adjacent to existing transmission lines, such as matching tower placement and ROW clearing methods. **SDA-6, SDA-7,** and **SDA-8** would reduce the amount and type of initial vegetation removal /disturbance and protect the area's natural screening to the maximum amount possible. **SDA-9** and **SDA-10** would provide a process for developing site-specific plans and ensuring appropriate reclamation and visual mitigations have taken place. **SDA-11** would ensure that chemical agents would not be used for ROW vegetation maintenance. There are no portions of the refined transmission corridor within the Cottonwood Canyon or Sowers Canyon East URUD area that would not be within their respective IRAs; however, there is potential for roads and construction support areas to occur outside of the refined transmission corridor, which could affect portions of the URUD area that are not included in the IRA (although in general, these URUD areas do not extend beyond their respective IRAs). Application of **SDA-12** is proposed to extend the requirement for roadless construction techniques to any portion of an URUD area that is located outside of the IRA. Application of **SDA-13** is proposed to ensure that all applicable SDA mitigation is applied to URUD areas located both within and outside of IRAs. This would allow application of the mitigation measures identified above to URUD areas. Together, these proposed mitigations would reduce impacts by eliminating roads and staging areas in URUD areas, reducing visual impacts by allowing a greater diversity of vegetation within the ROW, and otherwise protecting wilderness characteristics, allowing the Ashley National Forest to consider these portions of the URUD area for IRA and/or wilderness designation when they complete their LRMP revision.

Tie Fork IRA. Within the Uinta National Forest Planning Area, the refined transmission corridor also would include less than 1 acre of the Tie Fork IRA. As currently mapped, the alignment and 250-foot-wide transmission line ROW would not cross the IRA, but portions of the refined transmission corridor were retained because an existing high clearance vehicle access road along the southern edge of, and partially within, the IRA is proposed for use. Modeled disturbance calculations estimate no ROW vegetation removal and less than 0.1 acre of construction surface disturbance, none of which would be permanent. Application of **SDA-1** would ensure that construction staging areas are not placed within the IRA. Application of **SDA-2** would require rehabilitation of any improved existing road within an IRA to pre-project conditions if determined by the USFS to be appropriate to protect the area's natural integrity. **SDA-9** and **SDA-10** would provide a process for developing site-specific plans and ensuring appropriate reclamation has taken place.

National Monuments

Impacts to the Dinosaur National Monument would be the same as Alternative II-A.

National Historic Trails

There would be no impacts to NHTs.

Alternative II-F

Alternative II-F would cross the Lower Green River Corridor ACEC, Lower Green River WSR, and the Cedar Knoll IRA/URUD area. The refined transmission corridor also would include portions of one additional ACEC and one IRA not crossed by the alignment. The area outside the refined transmission corridor in which roads or construction support areas could be located would include one additional ACEC, one IRA, and be situated south of one national monument. There would be no impacts to NHTs.

BLM SDAs

Impacts to the Lower Green River Corridor ACEC, Lower Green River WSR, Lears Canyon ACEC, and Nine Mile Canyon ACEC would be the same as under Alternative II-D.

USFS IRAs and Unroaded/Undeveloped Areas

Impacts to the Cedar Knoll IRA/URUD Area would be the same as under Alterative II-A. Impacts to IRA 401009 would be the same as under Alternative II-D. Impacts to the Tie Fork IRA would be the same as under Alternative II-E.

National Monuments

Impacts to the Dinosaur National Monument would be the same as Alternative II-A.

National Historic Trails

There would be no impacts to NHTs.

Alternative II-G (Agency Preferred)

Alternative II-G would cross Chipman Creek IRA and the Cedar Knoll IRA. The refined transmission corridor also would include a very small portion of two additional IRAs. Both the refined transmission corridor as well as the area in which roads or construction support areas could be located would be south of the Dinosaur National Monument visitor entrance, but would not encroach onto the monument proper. Alternative II-G would not cross any NHTs or BLM-designated ACECs.

BLM SDAs

Alternative II-G would not cross any BLM-designated ACECs.

USFS IRAs and Unroaded/Undeveloped Areas

Impacts to the Chipman Creek IRA, Cedar Knoll IRA/URUD Area, Tie Fork IRA, and Willow Creek IRA would be the same as discussed for Alternative II-A.

National Monuments

Impacts to the Dinosaur National Monument would be the same as Alternative II-A.

National Historic Trails

Alternative II-G would not cross any NHTs.

Alternative Variations in Region II

There would be no changes to impacts to BLM SDAs or NHTs under the Reservation Ridge Alternative Variation, as neither the variation nor the segments that the variation would replace include any of these SDAs. Selection of the Reservation Ridge Alternative Variation would result in surface and other disturbances within six USFS SDAs. The disturbance would be within one IRA within the Uinta National Forest Planning Area (the Soldier Summit IRA) and two IRA/URUD areas in the Ashley National Forest (IRA 401012/Right Fork Indian Canyon URUD area and IRA 401013/Mill Hollow URUD area). The portion of Alternative II-F that this variation would replace would not cross any IRAs or URUD areas. **Appendix H** includes a more detailed description of the existing condition of the IRAs and URUD areas crossed by this alternative variation. Additional information regarding Project impacts to can be found in IRA/URUD area worksheets contained in the Project Record.

Alternative Connectors in Region II

There would be no impacts to SDAs from the 250-foot-wide transmission line ROW for any of the Lynndyl, IPP East, Castle Dale, Roan Cliffs, or Price alternative connectors.

Region II Series Compensation Stations (Design Option 3)

Under Design Option 3, the alternative routes would be the same, but a series compensation station would be necessary along the alternative routes of Region II during the first-phase (AC operation). There are three potential sites, each corresponding to specific alternative routes. Upon completion of Phase 2 of Design Option 3, when there is no further utility for the station, it would be deconstructed and reclaimed to the original condition. These series compensation station alternatives are depicted in **Figure 2-3**. There are no SDAs along the alternative route near the proposed location for Series Compensation Station 1 (Alternatives II-A, II-E, and II-G). The proposed location for Series Compensation Station 2 (Alternatives II-B and II-C) would be about 5 miles from the McInnis Canyon NCA and would not encroach into the NCA (see **Table 3.15-7** and Section 3.15.4.4). The proposed location for Series Compensation Station 3 (Alternatives II-D and II-F) would be about 5 miles from the area where Alternatives II-D and II-F would cross the Lower Green River Corridor ACEC and Lower Green River WSR and where some surface disturbance is proposed (see **Table 3.15-7** and Section 3.15.4.4). There would be no impacts to these SDAs from construction and operation of the compensation station as long as the location is not relocated to within the SDA. Application of **SDA-14** is proposed to eliminate impacts to SDAs from the series compensation station if the site is relocated along the route during on-the-ground project siting.

Region II Conclusions

Alternatives II-A, II-E, and II-G would have no impacts to BLM SDAs. Alternatives II-B and II-C would primarily affect SDAs in Colorado; whereas Alternatives II-D and II-F would affect SDAs in Utah. Of these four alternatives, Alternatives II-B and II-C would have fewer miles of alignment within SDAs and would be more compatible with SDA management because they would be located within a designated utility corridor within SDAs. Alternatives II-D and II-F would have greater mileages within SDAs, would cross a ROW avoidance area, and would not conform with the criteria for a WSR “scenic” designation, which would require a plan amendment.

Alternatives II-B and II-D would have no impacts to USFS IRAs or URUD areas. Alternatives II-A and II-G would have about 3 miles of alignment within two IRAs; micro-siting options within the Uinta National Forest Planning Area could reduce this mileage to 1 mile. Design features and mitigation would be used to reduce impacts to the IRA’s wilderness qualities, but there would be changes to wilderness character (primarily because of structure visibility) and line placement would affect manageability, particularly if micro-siting options are not selected. Alternative II-E would contain the most mileage within IRAs (over 9 miles), with similar impacts to wilderness character because of structure visibility; however, IRA manageability is less likely to be affected. Alternative II-C would have no impacts to IRAs; however,

the placement of 7 miles of alignment within one URUD area would result in changes to wilderness character of the entire URUD area and could preclude the ability to manage this area as IRA/wilderness. Alternative II-F would cross about 0.25 mile of one IRA.

Alternatives II-A, II-D, II-E, II-F, and II-G would have no impacts to NHTs. Alternatives II-B and II-C both would affect Old Spanish NHT segments along I-70 and near the Town of Green River (Book Cliffs AU and the southeast portion of the San Rafael Swell AU), lowering the scenic and overall ratings of the western portion of the Book Cliffs AU (from Class B to Class C and from SI to SII). No historic sites or interpretive sites would be affected by the presence of the transmission line. Alternative II-C would have the greatest impacts on the NHT, as it would cross the NHT seven additional times (three times within the western portion of the San Rafael Swell AU and four times on USFS lands) and would have 50 more miles of trail within the transmission line viewshed than Alternative II-B.

Once the final route is selected, an intensive Class III inventory and in-depth setting analysis would be conducted to determine the impact to contributing trail segments crossed by the route or from which the route would be visible. If contributing segments would be adversely affected, the effects would be minimized or mitigated onsite or offsite as stipulated in the mitigations proposed in Section 3.11, Cultural Resources (**CUL-3**), as stipulated in the Cultural Resources PA developed for the Project, and through implementation of Design Features and BMPs in concert with the NPS and the Utah BLM National Trails Management Program Lead.

Impacts to SDAs would be reduced through application of mitigation, including avoidance/reclamation of road construction, Level 3 vegetation management, applying roadless construction methods to URUD areas, etc., but the impacts of a constructed transmission line (primarily visual impacts, temporary and permanent disturbance with accompanying loss of habitat, and degradation of wilderness qualities) would remain.

3.15.6.5 Region III

Tables 3.15-12 through **3.15-14** provide a list of the SDAs in Region III that would be within the refined transmission corridor or outside of the refined transmission corridor but within the area in which temporary construction support areas or temporary or permanent roads could be constructed. For more information on the surface disturbance model, please see Section 3.1. These areas also are depicted in **Figures 3.15-3**, **3.15-7**, **3.15-12**, and **3.15-16**.

Alternative III-A (Applicant Proposed)

Alternative III-A would cross the Beaver Dam Slope ACEC in the BLM St. George and Cedar City FOs, the Beaver Dam Wash NCA in the BLM St. George FO (which is partially co-located with the Beaver Dam Slope ACEC), the Mormon Mesa and Mormon Mesa-Ely ACECs in both the BLM Las Vegas and Caliente FOs, the Muddy River WSR, the Mogotsu IRA, the Atchinson IRA/URUD area, Cove Mountain IRA/URUD area, the Moody Wash/Mogotsu URUD area, and the Old Spanish NHT.

Table 3.15-12 Region III: BLM SDAs within Areas of Potential Impact

Field Office	Special Designation Area	Alternative III-A Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)	Alternative III-B Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)	Alternative III-C Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)	Alternative III-D Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)
BLM St. George FO, Utah	Beaver Dam Wash NCA	0 / 0 105 / 71 / 22	N/A	N/A	N/A
	Beaver Dam Slope ACEC	5 / 118 96 / 58 / 15	N/A	N/A	N/A
BLM Caliente FO, Nevada	Mormon Mesa-Ely ACEC (Caliente FO)	9 / 278 169 / 92 / 21	9 / 258 236 /107 / 16	N/A	9 / 258 236 /107 / 16
	Beaver Dam Slope ACEC (Caliente FO)	4 / 164 39 /45 / 19	0 / 0 0 / 1 / <1	N/A	0 / 0 0 / 1 / <1
	Clover Mountains Wilderness	N/A	0 / 0 0 / 0 / 0	N/A	0 / 0 0 / 0 / 0
	Delamar Mountains Wilderness	N/A	N/A	0 / 0 0 / 0 / 0	N/A
BLM Las Vegas FO, Nevada	Mormon Mesa ACEC (LVFO)	8 / 233 50 / 55 / 22	15 / 441 235 / 127 / 21	N/A	15 / 441 235 / 127 / 21
	Coyote Springs Valley ACEC	N/A	N/A	24 / 726 574 / 297 / 58	N/A
	Muddy River WSR	1 crossing / 14 9 / 5 / 2	1 crossing / 1 <1 / <0.1 / <0.1	N/A	1 crossing / 1 <1 / <0.1 / <0.1
	Meadow Valley Wash WSR	N/A	1 crossing / 18 9 / 5 / 1	N/A	1 crossing / 18 9 / 5 / 1

Note: See Introduction to Section 3.15.4 for an explanation of how the combination of impact indicators describes the SDA location in relation to the alignment, 250-foot-wide transmission line ROW, refined transmission corridor, and area outside of the refined transmission corridor in which roads or construction support areas may be located. For more information about disturbance modeling, please see Section 3.1.

Table 3.15-13 Region III: USFS SDAs within Areas of Potential Impact

National Forest	Special Designation Area	Alternative III-A Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)	Alternative III-B Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)	Alternative III-C Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)	Alternative III-D Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)
IRAs					
Dixie National Forest	Mogotsu IRA	1 / 27 12 / 10 / 2	N/A	N/A	N/A
	Atchinson IRA	1 / 45 9 / 7 / 2	N/A	N/A	N/A
	Cove Mountain IRA	3 / 83 11 / 9 / 2	N/A	N/A	N/A
URUD Areas					
Dixie National Forest	Moody Wash/Mogotsu	0 / 27 13 / 15 / 5	N/A	N/A	N/A
	Atchinson	4 / 139 37 / 34 / 9	N/A	N/A	N/A
	Cove Mountain	2 / 70 11 / 9 / 2	N/A	N/A	N/A

Note: See Introduction to Section 3.15.4 for an explanation of how the combination of impact indicators describes the SDA location in relation to the alignment, 250-foot-wide transmission line ROW, refined transmission corridor, and area outside of the refined transmission corridor in which roads or construction support areas may be located. For more information about disturbance modeling, please see Section 3.1.

Table 3.15-14 National Wildlife Refuges, National Historic Trails, and USFWS-Proposed Wilderness

Special Designation Area	Alternative III-A	Alternative III-B	Alternative III-C	Alternative III-D
	Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)	**Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)**	**Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)**	**Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)**
National Wildlife Refuge (USFWS)				
Desert NWR	N/A	N/A	20 / 600 603 / 283 / 51	N/A
Pahranagat NWR	N/A	N/A	0 / 0 13 / 6 / 1	N/A
Old Spanish NHT (BLM/NPS)				
Number of crossings and segment rating	2 to 4 segments crossed (I eligible); 1 NHT-1, 3 unrated[1]	1 segment crossed; unrated	1 segment crossed; unrated	1 segment crossed; unrated
Visibility of the alternative from the Old Spanish Trail	Visible along 53 miles (8 miles NHT-I, 2 miles NHT-II, < 0.1 mile NHT-IV; 43 miles-unevaluated[1])	Visible along 38 miles (5 miles NHT-I, 1 mile NHT-II, < 0.1 mile - NHT-IV; 32 miles unevaluated	Visible along 6 miles (none evaluated)	Visible along 38 miles (5 miles NHT-I, 1 mile NHT-II, < 0.1 mile -NHT-IV; 32 miles unevaluated
Associated Historic Sites and natural features, and nearby recreation or interpretive features	Meadow Valley Wash, Muddy River, Virgin River, Mountain Meadows NHL	Meadow Valley Wash, Muddy River	None	Meadow Valley Wash, Muddy River
Management/Land Use	All crossings in BLM/ USFS designated utility corridors	All crossings in BLM designated utility corridors	All crossings in BLM designated utility corridors	All crossings in BLM designated utility corridors
USFWS-Proposed Wilderness				
Proposed Wilderness #1	N/A	N/A	4 / 121 204 / 87 / 13	N/A
Proposed Wilderness #2	N/A	N/A	0 / 0 0 / 18 / 8	N/A
Proposed Wilderness #3	N/A	N/A	4 / 129 26 / 30/ 7	N/A
Unit 2 Las Vegas Range Proposed Wilderness	N/A	N/A	0 / 0 0 / 1 / 0	N/A
Unit 3 Sheep Range Proposed Wilderness	N/A	N/A	8 / 233 142 / 71 / 14	N/A

[1] Trail condition on USFS lands has not been evaluated.

Note: See Introduction to Section 3.15.4 for an explanation of how the combination of impact indicators describes the SDA location in relation to the alignment, 250-foot-wide transmission line ROW, refined transmission corridor, and area outside of the refined transmission corridor in which roads or construction support areas may be located. For more information about disturbance modeling, please see Section 3.1.

BLM SDAs

Beaver Dam Slope-SGFO ACEC. Within the BLM St. George FO, approximately 5 miles of the alignment and refined transmission corridor would cross the 48,519-acre Beaver Dam Slope ACEC. The ACEC is managed as a ROW avoidance area outside of designated corridors for protection of critical desert tortoise habitat as well as other special status species habitat. Per the St. George RMP, new ROW and temporary use permits are strongly discouraged within the Beaver Dam Slope ACEC and shall only be authorized if no reasonable alternative exists and impacts to tortoises and their habitat can be mitigated, and surface disturbance (before restoration) resulting from all new ROWs and temporary use permits in the ACECs shall not exceed 40 acres through the life of the Project. This stipulation does not state that the designated utility corridor is exempt from the disturbance cap. BLM stipulations also indicate that road paving would not be allowed and construction of unpaved roads could occur only if positive benefits to tortoise management would occur (with concurrence from the USFWS). The St. George RMP contains numerous additional BMPs and requirements to reduce impacts to desert tortoise, including road speed limits, a mitigation plan with required surveys and monitoring, employee education, and other measures to reduce impacts to desert tortoise.

The refined transmission corridor would be entirely located within a designated utility corridor (the BLM's preferred location for meeting utility transmission and distribution needs), but development of a transmission line, roads, and construction support areas in this area would still conflict with desert tortoise management protections. The refined transmission corridor, which represents the maximum extent in which ROW shifts could occur and where most roads and construction support areas would be located, contains areas both within and outside of the ACEC. Modeled disturbance calculations estimate 96 acres (0.2 percent of the ACEC) of ROW vegetation removal, 58 acres of construction surface disturbance, and 15 acres of operations disturbance. These modeled acreages assume that there is potential for some portions of ROW clearing, tower sites, roads, and/or construction support areas to move outside of the ACEC as site-specific adjustments are made. If the 250-foot-wide transmission line ROW does not shift from its current mapped location, approximately 0.2 percent of the ACEC (118 acres) would be subject to ROW vegetation removal and/or surface disturbance. Of the modeled disturbance acreages, an estimated 12 and 6 acres of construction and operation disturbance, respectively, have the potential to extend beyond the designated utility corridor. TransWest's commitment to avoidance of special status species habitat would reduce impacts to special status species values; however, with the inclusion of disturbance acreages both within and outside of the designated corridor, modeled construction disturbances would not be below the BLM's acreage cap. Development of any roads or support areas outside the designated corridor would reduce desert tortoise habitat and although these surface disturbance would be less than the 40-acre cap, construction in these areas is unlikely to result in positive benefits to desert tortoise management. Application of **SDA-3** would limit road construction and human activity to only those areas within the designated utility corridor and application of **SDA-2** (full road reclamation) would further reduce risk through road reclamation; however, initial vegetation removal and surface disturbance would still occur within the corridor. Adherence to agency stipulations and development of a desert tortoise mitigation plan would reduce impacts to desert tortoise within the corridor during construction. Application of **SDA-5** is proposed to reduce impacts to desert tortoise habitat by limiting the amount of vegetation maintenance (also see Section 3.8 for wildlife mitigation related to desert tortoise critical habitat).

Beaver Dam Wash NCA. Although the refined transmission corridor would be entirely located within a designated utility through the 63,500-acre Beaver Dam Wash NCA, there would be a potential for construction disturbance associated with improving existing access roads that may extend into the NCA. Since the NCA is largely co-located with the Beaver Dam Slope ACEC, the stipulations and requirements identified above for protection of the desert tortoise would apply in shared areas. Modeled disturbance calculations estimate 105 acres (0.2 percent of the NCA) of ROW vegetation removal, 71 acres of construction surface disturbance, and 22 acres of operations disturbances. All of these activities could affect desert tortoise or other special status species habitat. Of the modeled disturbance

acreages, an estimated 18 and 10 acres of construction and operation disturbance, respectively, have the potential to extend beyond the designated utility corridor and into shared NCA/ACEC ROW or NCA-only ROW avoidance areas. Application of **SDA-3** would reduce impacts to NCA values by limiting road construction to only those areas within the designated utility corridor; however, vegetation removal and surface disturbance would still occur within the corridor. Agency buffers and TransWest's commitment to avoidance of special status habitat would reduce impacts to desert tortoise and other special status species located within the corridor. Application of **SDA-2** (full road reclamation) would reduce operation impacts. Adherence to agency stipulations and development of a desert tortoise mitigation plan would reduce impacts to desert tortoise within the corridor during construction. Application of **SDA-5** is proposed to reduce impacts to desert tortoise habitat by limiting the amount of vegetation maintenance (also see Section 3.8 for mitigation related to desert tortoise critical habitat).

Beaver Dam Slope-CFO ACEC. Within the BLM Caliente FO, approximately 4 miles of the alignment and refined transmission corridor would cross the 36,800-acre Beaver Dam Slope ACEC within a designated utility corridor. As currently mapped, the refined transmission corridor would be fully located within the designated utility corridor. The ACEC is designated for protection of desert tortoise and is a ROW avoidance area. Per the Ely District RMP, ROWs within desert tortoise habitat are to be managed the same as ACECs; therefore, development of a transmission line, roads, and construction support areas within the designated utility corridor would still conflict with desert tortoise management protections. Modeled disturbance calculations estimate 39 acres (less than 0.1 percent of the ACEC) of ROW vegetation removal, 45 acres of construction surface disturbance (0.1 percent of the ACEC), and 19 acres of operations (permanent) disturbance. These modeled acreages assume that there is potential for some portions of ROW clearing, tower sites, roads, and/or construction support areas to move outside of the ACEC as site-specific adjustments are made. If the 250-foot-wide transmission line ROW does not shift from its current mapped location, approximately 0.4 percent of the ACEC (164 acres) would be subject to ROW vegetation removal and/or surface disturbance. Of the modeled disturbance acreages, an estimated 20 and 12 acres of construction and operation disturbance, respectively, have the potential to extend beyond the designated utility corridor into ROW avoidance areas, which would be inconsistent with SDA management stipulations. TransWest's commitment to avoidance of special status habitat would reduce impacts to special status species values and the Ely District RMP contains numerous BMPs to reduce impacts to desert tortoise including development of a mitigation plan that includes surveys and monitoring, employee education, and other measures to reduce impacts to desert tortoise. Adherence to these agency stipulations and development of a desert tortoise mitigation plan would reduce impacts to desert tortoise within the corridor during construction. Application of **SDA-3** would limit impacts to the ACEC values from road construction and human activity to only those areas within the designated utility corridor and application of **SDA-2** (full road reclamation) would reduce the final operations disturbance acreage and corresponding losses of desert tortoise habitat within the designated utility corridor; however, all ROW vegetation removal and construction surface disturbances acreages described above would still occur. Application of **SDA-5** is proposed to further reduce impacts to desert tortoise habitat by limiting the amount of initial and ongoing ROW vegetation maintenance through selective vegetation removal techniques (also see Section 3.8 for mitigation related to desert tortoise critical habitat).

Mormon Mesa-Ely ACEC Approximately 9 miles of the alignment and refined transmission corridor would cross the 109,680-acre Mormon Mesa-Ely ACEC. The ACEC is managed for the protection of critical desert tortoise habitat and sensitive plant species populations and is a ROW exclusion area outside of the designated utility corridor. Per the Ely District RMP, ROWs within desert tortoise habitat are to be managed the same as ACECs; therefore, development of a transmission line, roads, and construction support areas even within the designated utility corridor would still conflict with desert tortoise management protections, as project vegetation removal and surface disturbances could affect desert tortoise or other special status species habitat. The refined transmission corridor would be fully within the designated utility corridor except for a 0.2 mile portion, which would be partially within ROW exclusion areas. As currently mapped, the alignment and 250-foot-wide transmission line ROW also

would cross the ROW exclusion area at this location. Modeled disturbance calculations estimate 169 acres (0.2 percent of the ACEC) of ROW vegetation removal. There would be an estimated 92 acres of construction surface disturbance and 21 acres of operations disturbance. These modeled acreages assume that there is potential for some portions of ROW clearing, tower sites, roads, and/or construction support areas to move outside of the ACEC as site-specific adjustments are made. If the alignment and 250-foot-wide transmission line ROW do not shift from the current mapped location, there would be approximately 0.3 percent of the ACEC (278 acres) subject to ROW vegetation removal and/or surface disturbance and approximately 0.1 mile of alignment would be within ROW exclusion areas. Of the modeled acreages, there is potential for an estimated 13 acres of ROW clearing and 6 and 1 acres of construction and operation disturbance, respectively, to extend beyond the designated utility corridor into ROW exclusion areas. Development of roads or construction support sites in these areas would not be in conformance with management of these areas as ROW exclusion areas. The Ely District RMP contains numerous BMPs to reduce impacts to desert tortoise including a development mitigation plan that includes surveys and monitoring, employee education, and other measures to reduce impacts to desert tortoise. Application of **SDA-3** would limit the impacts to ACEC values from transmission line construction, road construction and human activity to only those areas within the designated utility corridor. **SDA-2** (full road reclamation) would further reduce risk; however, initial vegetation removal and surface disturbance would still occur within the corridor. Adherence to agency stipulations and development of a desert tortoise mitigation plan would reduce impacts to desert tortoise within the corridor during construction. Application of **SDA-5** is proposed to reduce impacts to desert tortoise habitat by limiting the amount of vegetation maintenance (also see Section 3.8 for mitigation related to desert tortoise critical habitat).

Mormon Mesa-LVFO ACEC. Within the BLM Las Vegas FO, approximately 8 miles of the alignment and refined transmission corridor would cross the 151,360-acre Mormon Mesa ACEC. The ACEC is managed as a ROW avoidance area outside of designated utility corridors to protect critical desert tortoise habitat. Reclamation of temporary roads is required and ROW corridors are limited to 3,000 feet. The alignment and 250-foot-wide transmission line ROW would be located within an existing designated utility corridor and would be in conformance with area management. A very small portion of the refined transmission corridor extends into ROW avoidance areas outside of the designated utility corridor. Modeled disturbance calculations estimate 50 acres (less than 0.5 percent of the ACEC) of ROW vegetation removal, 55 acres of construction surface disturbance, and 22 acres of operations disturbance. These modeled acreages assume that there is potential for some portions of ROW clearing, tower sites, roads, and/or construction support areas to move outside of the ACEC as site-specific adjustments are made. If the 250-foot-wide transmission line ROW does not shift from its current mapped location, approximately 0.2 percent of the ACEC (233 acres) would be subject to ROW vegetation removal and/or surface disturbance. Of the modeled disturbance acreages, there is potential for an estimated 34 and 18 acres of construction and operation disturbance, respectively, to extend beyond the designated utility corridor into ROW avoidance areas. Development of roads or construction support sites in these areas would not be in conformance with area management goals. TransWest's commitment to avoidance of special status habitat, adherence to agency stipulations, and development of a desert tortoise mitigation plan would reduce impacts to desert tortoise during construction, but there would still be some temporary and permanent loss of desert tortoise habitat. Application of **SDA-3** would limit the impacts to ACEC values from road construction and construction support areas by restricting activities to only those areas within the designated utility corridor and application of **SDA-2** (full road reclamation) would further reduce risk, but would not fully eliminate vegetation removal and surface disturbances within the designated utility corridor. Application of **SDA-5** is proposed to reduce impacts to desert tortoise habitat by limiting the amount of vegetation maintenance (also see Section 3.8 for mitigation related to desert tortoise critical habitat).

Muddy River WSR. Under Alternative III-A, the alignment and refined transmission corridor would cross an 11-mile segment (524 acres) of the Muddy River eligible for WSR "recreational" designation on the basis of its outstanding and remarkable wildlife, cultural, and fish values. Alternative III-A would not be

located within a designated utility corridor or an existing ROW, which is not consistent with BLM guidance for WSR management (BLM Manual 6400). There is an alternative (Alternative III-B) that could be selected that would cross the river segment within a designated utility corridor and existing transmission lines. Modeled disturbance calculations estimate 9 acres subject to ROW vegetation removal, 5 acres of construction surface disturbance, and 2 acres of operations disturbance. These modeled acreages assume that there is potential for some portions of ROW clearing, tower sites, roads, and/or construction support areas to move outside of the WSR area as site-specific adjustments are made. If the 250-foot-wide transmission line ROW does not shift from its current mapped location, approximately 3 percent of the WSR area (14 acres) would be subject to ROW vegetation removal and/or surface disturbance. Development of a transmission line crossing in this area would be consistent with the criteria for a "recreational" designation (substantial evidence of human activity, readily accessible by road, etc.). Impacts to the outstanding remarkable values of the river segment would be reduced by design features and agency BMPs, including riparian habitat and sensitive species habitat buffers and BMPs to reduce potential for erosion and sedimentation that could affect fish habitat. Potential impacts to cultural resources from surface disturbance would be mitigated through the compliance with the Project PA. Application of **SDA-1** and **SDA-2** is proposed to eliminate or further reduce impacts from road and construction staging areas within the eligible WSR area. Application of **SDA-5** is proposed to further minimize impacts to the recreational classification of the WSR area; however, the vegetation types are such that full clearing may not be required and the riparian area may be able to be spanned. Application of **SDA-13** would provide for site-specific component placement to allow the BLM to protect the "recreational" classification of this river segment until a suitability analysis has been completed.

USFS IRAs and URUD Areas

Atchinson, Cove Mountain, and Mogotsu IRAs/URUD Areas. As currently mapped, the alignment and refined transmission corridor would cross the Atchinson, Cove Mountain, and Mogotsu IRAs/URUD areas. Roadless construction methods (as identified in the POD, see **Appendix D**) would be utilized within IRAs to ensure compliance with the Roadless Rule. These include vegetation removal for ROW preparation and vegetation management, use of existing roads and/or low impact vehicles for overland travel (i.e., no new road construction), and the use of helicopters or gin-poles for tower erection. Roadless construction techniques are not proposed for those portions of URUD areas outside of IRAs.

Construction disturbances within each of these IRA/URUD areas would be generally limited to ROW vegetation clearing and development of structure work area and wire-pulling, tensioning and splicing sites associated with the construction of towers within the IRA/URUD area. These activities could alter natural vegetation processes where overstory vegetation is removed, potentially altering the understory vegetation. Establishment of tower sites, structure work areas, and overland access within the IRA could disrupt natural drainage patterns and contribute to sedimentation of waterways in the area. TransWest would apply Design Features and BMPs to reduce sedimentation to protect water resources within the IRA, such as the intermittent streams that are tributaries to State-listed Impaired Waters (including Newcastle Reservoir and the Santa Clara River; see TWE-8, TWE-19, TWE-22, among others).Vegetation removal and root damage would be minimized through application of TWE-11, and TWE-26 through TWE-28 and TransWest would develop of vegetation and noxious weed management plans, to reduce impacts to natural integrity of the IRAs. Helicopter construction would require the use of 7-acre helicopter fly yards located every 5 miles along the area where helicopter construction is planned; however, it is anticipated that these would be located outside of the IRA/URUD areas. Impacts to any cultural resource sites would be mitigated per the PA (Section 3.11, Cultural Resources and Native American Concerns).

During construction, the sights and sounds of construction would have potential to be seen or heard in areas beyond the refined transmission corridor and visitor access near the corridor could be temporarily affected. These impacts would be temporary (3 to 12 weeks, depending on the IRA) and would not affect

the majority of the IRAs. In each IRA/URUD area, the refined transmission corridor would cross areas designated as RN, SPM, and/ or SPNM ROS. Construction activities would be beyond expected conventional motorized use in RN and SPM areas and not consistent with the SPNM ROS designation; however, impacts from construction noise, existing road traffic, and other activity would be temporary (also see Section 3.13, Recreation Resources, for more information about ROS).

After construction is complete, work areas would be re-contoured to reestablish any altered natural drainage patterns. Areas used for overland access would be restored as necessary. ROW vegetation would be reestablished in accordance with USFS seed mix requirements and in accordance with TransWest's vegetation management practices. Reclamation areas would be monitored for 3 to 5 years in accordance with USFS requirements (**Appendix D**). The reestablished vegetation would reduce the effects of erosion and habitat removal on ecological systems within the IRA, but the vegetation may not ever return to the original vegetation communities and ROW vegetation would continue for the life of the Project. Once constructed, access to the IRAs/URUD areas would remain largely unchanged. During operations, TransWest would use aircraft or non-motorized methods for maintenance and would work with the USFS to identify appropriate vegetation management techniques and prevent unauthorized ROW ORV travel. Effects from maintenance activities (vegetation management, line inspection) would largely be limited to the area along the western border of the IRA. During these limited activities personnel, vehicles, helicopters (potentially), and equipment would be seen and heard within the IRA.

The alignment and refined transmission corridor would cross 1 mile of the 17,660-acre Atchinson IRA. Modeled disturbance calculations identify the potential for 9 acres of ROW vegetation clearing (0.1 percent of the IRA) and 7 acres of construction surface disturbances within the IRA, of which 2 acres would be permanent. These acreages assume that there is potential for some portions of ROW clearing, tower sites, roads, and/or construction support areas to move outside of the IRA as site-specific adjustments are made. If the mapped 250-foot-wide transmission line ROW does not shift, approximately 0.2 percent (45 acres) of the IRA would be within areas where ROW vegetation clearing and/or surface disturbance would occur. Once constructed within the IRA, the transmission line and cleared ROW would be apparent to visitors from approximately 42 percent (7,428 acres) of the Atchinson IRA. The new structures would be concentrated along its western boundary and in proximity to two existing transmission lines and Highway 18. The viewshed of the transmission line would include most of the western half of the IRA, with the exception of side canyons shielded from the view by aspect or terrain. The viewshed would include 6,238 acres of SPNM areas of the IRA (43 percent of the most natural portions of the IRA) as well as 35 percent of all SPM and 62 percent of all RN areas within the IRA. One pack trail would be within the viewshed. The viewshed of the eastern half of the IRA would largely remain unaffected, with the exception of a few ridgelines or side hills with views to the west. Disturbances would be located on the western edges of the IRA/URUD area (see **Figure 3.15-17**), keeping over 99.9 percent of the IRA and URUD area unfragmented and well over the requisite 5,000 acres with minimal effect on manageability. Most of these areas also are within the viewshed of existing lines.

The alignment and refined transmission corridor would cross 3 miles of the 16,639-acre Cove Mountain IRA. Modeled disturbance calculations identify the potential for 11 acres of ROW vegetation clearing (0.1 percent of the IRA) and 9 acres of construction surface disturbances within the IRA, of which 2 acres would be permanent. If the mapped 250-foot-wide transmission line ROW does not shift, approximately 83 acres (0.5 percent) of the IRA would be within areas where ROW vegetation clearing and/or surface disturbance would occur. Once constructed within the IRA, the transmission line and cleared ROW would be visible from 46 percent (7,594 acres) of the IRA. The new structures would be concentrated along the IRA's western boundary and adjacent to two existing transmission lines. The viewshed of the transmission line would generally include all of the northwestern portions of the IRA, with the exception of side canyons shielded from the view by aspect or terrain. The viewshed would include 6,037 acres of SPNM areas of the IRA (51 percent of the most natural portions of the IRA) as well as 34 percent of all

SPM and 28 percent of all RN areas within the IRA. Most of these areas also are within the viewshed of existing lines.

The alignment and refined transmission corridor would cross 1 mile of the 16,772-acre Mogotsu IRA. Modeled disturbance calculations identify the potential for 12 acres of ROW vegetation clearing (0.1 percent of the IRA) and 10 acres of construction surface disturbances within the IRA, of which 2 acres would be permanent. If the mapped 250-foot-wide transmission line ROW does not shift, approximately 27 acres (0.2 percent) of the IRA would be within areas where ROW vegetation clearing and/or surface disturbance would occur. Once constructed within the IRA, the transmission line and cleared ROW would be visible from 48 percent of the IRA. The new structures would be concentrated along its eastern and southern boundaries and in proximity to two existing transmission lines. The viewshed would include 5,843 acres of SPNM areas of the IRA (47 percent of the most natural portions of the IRA) as well as 49 percent of all SPM and 45 percent of all RN areas within the IRA. Most of these areas also are within the viewshed of existing lines. The non-motorized trails within the IRA would be largely shielded from transmission line and ROW clearing views through slope, aspect or terrain.

Within all three IRAs, application of **SDA-1** is proposed to further reduce modeled construction disturbance acreages by eliminating construction staging areas /fly yards, material storage yards, and batch plant sites within the IRA. Application of **SDA-2** would require rehabilitation of any improved existing road to reduce the amount of human control or manipulation and reduce visual impacts.

Application of **SDA-5** (use of Level 3 Selective ROW Clearance Based vegetation management methods) is proposed to further reduce vegetation, wildlife and visual operational impacts from ROW clearing. This would minimize impacts to the diversity of plants and animals within the IRAs by allowing a greater diversity of vegetation to become reestablished and would effectively reduce visual impacts in pinyon-juniper or other vegetation types higher than 6 feet with understory. Section 3.12, Visual Resources, also includes additional mitigation for areas that are adjacent to existing transmission lines, such as matching tower placement and ROW clearing methods. **Appendix I** (Visual Resources) has a visual simulation of Atchinson IRA (SG-2). **SDA-6, SDA-7,** and **SDA-8** would reduce the amount and type of initial vegetation removal /disturbance and protect the area's natural integrity to the maximum amount possible. **SDA-9** and **SDA-10** would provide a process for developing site-specific plans and ensuring appropriate reclamation and visual mitigations have taken place. **SDA-11** would ensure that chemical agents would not be used for ROW vegetation maintenance within IRAs.

The Atchinson URUD area extends beyond the boundaries of the Atchinson IRA and there would be an additional 2 miles of alignment and almost 100 acres of mapped 250-foot-wide transmission line ROW within the URUD area but not within the IRA. The 15,678-acre Cove Mountain URUD area is smaller than its corresponding IRA and there is no acreage within the URUD area that is not within the IRA. The 58,994-acre Moody Wash/Mogotsu URUD area is much larger than the Mogotsu IRA (as it includes the Moody Wash IRA); however, the portions of the Moody Wash/Mogotsu URUD area and Mogotsu IRA that are within or adjacent to the refined transmission corridor generally have the same boundaries. There is no specific management restriction precluding road development in URUD areas outside of IRAs, provided the Standards and Guideline for general forest management are met and TransWest does not propose roadless construction techniques for those portions of URUD areas. As a result, URUD areas outside of IRAs could be subject to access road and support facility construction, and standard ROW clearing of the 250-foot-wide transmission line ROW, with concomitant impacts to wildlife habitat, opportunities for solitude and primitive recreation, and wilderness character. Viewshed impacts to the Atchinson and Cove Mountain URUD areas would be similar to their respective IRAs. The viewshed impacts to Moody Wash/Mogotsu URUD area would include transmission line and ROW clearing visibility from Bull Mountain and other areas with southeastern facing aspects. Moody Wash (eligible for the NWSRS with a "wild" classification) would be shielded from transmission line and ROW clearing views through slope, aspect, and terrain.

Because URUD area inventories represent the most recent USFS data regarding wilderness character, additional mitigation measures are proposed to provide same protections afforded to IRAs to those portions of an URUD area outside of an IRA area. Application of **SDA-12** is proposed to extend the requirement for roadless construction techniques to any portion of an URUD area that is located outside of the IRA. Application of **SDA-13** is proposed to ensure that all applicable SDA mitigation is applied to URUD areas located both within and outside of IRAs. This would allow application of the IRA mitigation measures outlined above. Together, these proposed mitigations would reduce impacts by eliminating roads and staging areas in URUD areas, reducing visual impacts by allowing a greater diversity of vegetation within the ROW, and otherwise protecting wilderness characteristics, allowing the Dixie National Forest to consider these portions of the Atchinson URUD area for IRA and/or wilderness designation when they complete their LRMP revision.

National Historic Trails

Alternative III-A would cross the Old Spanish NHT northern routes between two and four times. The alignment would be visible for 53 miles of the Old Spanish NHT. Impacts to each area of the Old Spanish NHT northern route that would be affected are discussed in greater detail below, from north to south.

N. Cedar City AU Crossings. Although this AU has not been mapped, inventoried, or evaluated by the BLM, it is expected that Alternative III-A would cross this portion of the Old Spanish NHT northern route twice. There are no NHT Condition Class ratings for these segments or information as to which segments within the N. Cedar City AU contribute to overall trail NRHP eligibility because the trail is primarily located on private lands (see Section 3.15.3.8, Old Spanish NHT Region III subsection). The proposed trail crossings would be located near existing transmission lines. The area is assumed to have moderate to low setting integrity given its generally low scenic quality (Class C), and development of the transmission line would be consistent with existing conditions and there are no known associated historic sites, recreation facilities, or interpretive features located near Old Spanish NHT northern route segments in this area.

USFS Dixie National Forest Crossings. Alternative III-A would cross the Old Spanish NHT northern route near Spring Creek, about 3 miles southwest of Central, Utah. The crossing would be within a WWEC-designated utility corridor and would parallel two existing transmission lines. Development of Alternative III-A would further define this trail crossing as a utility corridor and may reduce the scenic quality of the associated setting, particularly during construction, but development would be consistent with existing transmission lines and scenic quality would not be reduced from current Class B ratings. There are no known associated historic sites, recreation facilities, or interpretive features located near the proposed crossing. The closest associated historic site (the Mountain Meadows NHL and Site) is located about 5 miles to the northeast of the proposed trail crossing. The Alternative III-A alignment would come within 0.1 mile of the NHL (see also Section 3.11, Cultural Resources and Native American Concerns; Section 3.12, Visual Resources; and Section 3.13, Recreation Resources).

Mormon Mesa AU Crossings. Alternative III-A would cross the Old Spanish NHT northern route on BLM land east of I-15, near Logandale, Nevada. This segment is rated as NHT-I and contributes to NRHP eligibility. The crossing would be located between the Virgin River (8 miles to the east) and the Meadow Valley Wash and Muddy River (6 miles to the southwest via the mapped Old Spanish NHT northern route). Both waterbodies would have been important to travelers are part of the associated setting of this segment of the Old Spanish NHT northern route. Alternative III-A would not cross the Virgin River but would cross the Meadow Valley Wash and Muddy River about 3 miles east of the mapped Old Spanish NHT northern route river crossing. Towers would be placed to avoid surface disturbance near the actual trail and would span washes, and other natural features associated with the Old Spanish NHT northern route, the alignment would not be able to fully span the Meadow Valley Wash and Muddy River. Alternative III-A would cross the Old Spanish NHT northern route within a WWEC-designated utility corridor but would not parallel any existing transmission lines, though there are existing transmission

lines in or near the AU. The crossing would reduce the scenic quality of the associated setting, particularly during construction, but overall scenic quality would not be reduced from current Class B ratings.

Trail Visibility. Alternative III-A also would be visible from the Old Spanish NHT northern route for approximately 53 miles of trail segments. This includes mileage within the Mormon Mesa and California Crossing AUs, as well as mileage on BLM and USFS lands that has not been inventoried. **Table 3.15-15** summarizes key features of trail segments that would be in the Alternative III-A viewshed.

Of the 40 miles located on BLM lands, approximately 8 miles of Old Spanish NHT northern route trail segments are located within the Mormon Mesa AU and 1 mile is within the California Crossing AU. The remaining 30 miles of trail mileage are unevaluated but constitute those portions of the trail connecting the Mormon Mesa AU and California Crossing AUs, plus additional trail mileage south of the California Crossing AU. As noted in **Table 3.15-15**, the viewshed mileage does not include the N. Cedar City AU, because the location of the Old Spanish NHT northern route trail has not been mapped by the BLM. Regardless of the actual trail location, Scenic Quality would remain as Class B due to the presence of existing transmission lines

Table 3.15-15 Alternative III-A Visibility Impacts by Old Spanish NHT Analysis Unit

AU (Location)	Segment Rating	Number of Segments	Contributing Status	Miles of Trail within Viewshed[1]	Total Mileage within AU	Percentage of AU within Viewshed
Mormon Mesa (Las Vegas FO; (12 miles total)	Highest rating within AU (NHT-I; exceptional)	3	1 contributing segment	8	8	100
	Remaining mileage (evident)	3	1 contributing segment[2]	1	4	25
California Crossing (Las Vegas FO; 3 miles total)	Highest rating within AU (NHT-II; exceptional)	1	unevaluated	1	1	100
	Remaining mileage (high potential)	0	NA	0	2	0
BLM Southern Nevada District Office		NA	Unknown	30	NA	NA
USFS Dixie National Forest		N/A	Unknown	13	N/A	N/A

[1] Visibility of Alternative III-A from the historic trail is based on the 5-mile viewshed. Viewshed mileage does not include mileage within the N Cedar City AU, since this route has not been mapped.

[2] Two segments unevaluated.

Within the Mormon Mesa AU, selection of Alternative III-A would result in visual impacts to about 9 miles (75 percent) of the 12 miles of inventoried Old Spanish NHT northern route segments within this AU. This includes 8 miles of trail rated with the highest trail condition rating (NHT-I) and highest rating of NTSA values (“exceptional”) and constitutes 100 percent of the highest rated mileage within the AU. The remaining mileage comprises trail segments that are considered rated as having an “evident” expression of NTSA values. Affected mileage constitutes 25 percent of such segments within the AU. Two of the five trail segments within the viewshed are contribute to overall NRHP eligibility of the trail. The presence of the transmission line would affect the historic setting of the trail (currently characterized as retained) and could affect opportunities for the public to access and enjoy the trail. The portions of the trail segments that are rated as having Class A rated scenic quality would not be within the viewshed of the transmission line. Scenic Quality would remain as Class B due to the presence of existing transmission lines in the area (see **Appendix I**, scenic quality tables, figures and visual simulations); thus, the overall SI rating would not be reduced. There are no Old Spanish NHT interpretive sites located within this AU. The I-15 vehicle pullout would be within immediate foreground (0.0 to 0.5-mile) of the transmission line but does not contain offer interpretive materials related to the Old Spanish NHT.

Within the California Crossing AU, selection of Alternative III-A would result in visual impacts to about 1 mile (33 percent) of the 3 miles of Old Spanish NHT northern route inventoried trail segments within this AU. This mileage has the highest trail condition rating (NHT I) and highest rating of NTSA values ("exceptional") and constitutes 100 percent of the highest rated mileage within the AU. The AU contains one segment with well sorted gravels and two faint ruts; but in general, trail locations or traces are not readily visible within this AU. The NRHP eligibility of this trail segment has not been evaluated. The presence of the transmission line would affect the historic setting of the trail (currently characterized as retained), but scenic quality is already within the lowest class (Class C). There are no associated historic sites, interpretive sites, or recreation facilities located near these segments and this AU is not likely to be used as an interpretation site for the public as trail locations or traces are not readily visible.

Impacts to the remaining 30 miles of Old Spanish NHT northern route segments within the BLM Southern Nevada District Office that are not inventoried are assumed to have impacts similar to those described under the Mormon Mesa and California Crossing AUs. Scenic quality ratings in these areas, (which are average to low, Classes B and C), would not be reduced.

Trace ratings are not available for the 13 miles of trail on NFS lands that would be visible and the degree to which these segments contribute to NRHP eligibility is unknown. There is one associated historic site located near affected trail segments in this area, the Mountain Meadows NHL and Site, which would be in the viewshed. Scenic quality ratings in these areas (which are average to low, Classes B and C), would not be reduced due to the presence of existing transmission lines.

Overall, these impacts from Alternative III-A would not preclude development of a management corridor for the entire Old Spanish NHT northern route, but would diminish opportunities for effective management, protection and interpretation of the route within the Mormon Mesa AU (which contains most inventoried trail segments of high setting integrity) and other portions of the trail that are close to the waterbodies that influenced route development (Virgin River, Muddy River). Opportunities for Old Spanish NHT northern route trail interpretation in settings with high integrity may still exist but may be located outside of the Region III analysis area.

Section 3.12, Visual Resources, identifies mitigation measures to reduce visual impacts, including the use of BLM environmental colors, locating structures, roads, and other project elements as far back from road, trail, and river crossings as possible, and, where feasible, employing terrain and vegetation to screen views from crossings. These measures would reduce visual contrasts to a level consistent with RMP and LRMP objectives for the area.

Alternative III-B

Alternative III-B would cross the Mormon Mesa-Ely (BLM Caliente FO) and Mormon Mesa (BLM Las Vegas FO) ACECs, Muddy River WSR, and the Meadow Valley Wash WSR, and would cross a portion of the Old Spanish NHT. The area outside the refined transmission corridor in which roads or construction support areas could be located would include one additional ACEC and occur adjacent to one wilderness area. There would be no impacts to USFS SDAs.

BLM SDAs

Mormon Mesa-Ely ACEC. Impacts to the BLM Caliente FO Mormon Mesa-Ely ACEC would be similar to those described under Alternative III-A, except that modeled disturbance calculations include 67 more acres of ROW vegetation clearing, and 15 additional acres of initial construction disturbance. If the alignment and 250-foot-wide transmission line ROW for Alternative III-B does not shift from its current mapped location, there would be approximately 20 fewer acres within the ACEC as compared to Alternative III-A. Permanent disturbance would be about the same and there would be a similar amount of construction and operations disturbance located out of the designated utility corridor. As with Alternative III-A, application of **SDA-2, SDA-3**, and **SDA-5** are proposed to reduce impacts to desert

tortoise habitat by limiting the amount of road and construction site development and operational vegetation maintenance.

Mormon Mesa-–SGFO ACEC. Impacts to the BLM Las Vegas FO Mormon Mesa ACEC would be similar in type to those described under Alternative III-A but there would be almost 5 times as much modeled ROW vegetation clearing (235 acres or less than 0.2 percent of the ACEC) and about 2.5 times as much construction disturbance (127 acres) within the ACEC. If the alignment and 250-foot-wide transmission line ROW does not shift from its current mapped location, there would be approximately 205 more acres within the ACEC (0.3 percent of the ACEC) than under Alternative III-A. Modeled permanent disturbance would be about the same and there would be a similar amount of construction and operations disturbance located outside of the designated utility corridor. Application of **SDA-2, SDA-3**, and **SDA-5** are proposed to reduce impacts to desert tortoise habitat by limiting the amount of road and construction site development and operational vegetation maintenance.

Muddy River WSR. Under Alternative III-B, the refined transmission corridor would cross a segment of the Muddy River eligible for inclusion as a WSR under a "recreational" classification. Impacts to the outstandingly remarkable values and "recreational" classification of the WSR area would be similar to Alternative III-A, but the refined transmission corridor would be within a designated utility corridor and there would be less than 1 acre of ROW vegetation clearing construction disturbance, of which only a fraction would be permanent. The placement of Alternative III-B would be consistent with BLM Manual 6400, which states consistent with 43 CFR Parts 2800 and 2880 and to the greatest extent possible, the proposed ROWs through WSR boundaries must share, parallel, or adjoin existing ROWs. Application of **SDA-1** and **SDA-2** is proposed to eliminate or reduce impacts from road and construction staging areas within the eligible WSR area. Application of **SDA-5** is proposed to further minimize impacts to recreational classification of the WSR area. Impacts would be further minimized by application of **SDA-13**, which would require micro-siting of facilities to minimize surface disturbance or visual disturbance to the segment's outstandingly remarkable values.

Meadow Valley Wash WSR. The refined transmission corridor also would cross an 11-mile (524 acres) segment of the Meadow Valley Wash that is eligible for inclusion as a WSR under a "scenic" designation. The crossing would not be within a designated utility corridor but would parallel the designated utility corridor, which contains three existing transmission lines. Development of a transmission line would not be consistent with the criteria for a "scenic" classification (largely primitive and undeveloped, no substantial evidence of human activity, etc.); however, it is important to note that the presence of existing transmission lines in this area already is incompatible with this designation and construction of the TransWest line would be in compliance with the area's VRM Class III objectives. There are other alternatives that could be selected that do not cross segments eligible for inclusion into the NWSRS; however, this alternative was selected as the Agency Preferred alternative (i.e., the route that best addresses multiple resource concerns). Modeled disturbance calculations estimate 9 acres of ROW vegetation removal (less than 2 percent of the WSR area), 5 acres of construction surface disturbance, and 1 acre of operations disturbance within the WSR area. These acreages assume that there is potential for some portions of ROW clearing, tower sites, roads, and/or construction support areas to move outside of the WSR area as site-specific adjustments are made. If the 250-foot-wide transmission line ROW does not shift, approximately 18 acres (3 percent) of the eligible area would be subject to ROW vegetation removal and/or surface disturbance. Impacts to the outstandingly remarkable values (wildlife, cultural, and fish) of the eligible wash segment would be reduced by design features and agency BMPs, including riparian habitat and sensitive species habitat buffers and BMPs to reduce potential for erosion and sedimentation that could affect fish habitat. Application of **SDA-1** and **SDA-2** would reduce or limit road development within the WSR-eligible segment, whenever possible, or require reclamation where avoidance is not practicable, limiting disturbance within the eligible WSR area. Application of **SDA-5** (and other visual mitigations, see Section 3.12, Visual Resources) is proposed for all SDAs to minimize impacts to visual or other sensitive resources; the vegetation types are such that full clearing may not be required and the riparian area may be able to be spanned. Visual impacts from

operation of the line would not be eliminated. Application of **SDA-14** would require micro-siting of facilities to further minimize surface disturbance or visual disturbance to the segment's outstandingly remarkable values. Section 3.12, Visual Resources, also contains additional mitigation to reduce impacts, such as matching tower spacing to existing transmission lines.

Beaver Dam Slope ACEC. While the refined transmission corridor would not cross any other SDAs, the area in which roads and construction support areas could occur would include a small portion of the Beaver Dam Slope ACEC and be adjacent to the Clover Mountains Wilderness Area (BLM Caliente FO). The Beaver Dam Slope ACEC is designated for protection of desert tortoise and is a ROW avoidance area outside of designated utility corridors. The BLM Caliente FO has identified all designated wilderness as ROW exclusion areas. Modeled disturbance calculations estimate less than 1 acre of construction surface disturbance within the ACEC, of which only a fraction would be permanent. Application of **SDA-3** would eliminate all impacts to the Beaver Dam Slope ACEC by limiting all road and support site construction to the designated utility corridor, which is located outside of the ACEC. All disturbance areas would be located within a designated utility corridor adjacent to the Clover Mountain Wilderness Area; however, the wilderness quality in the areas closest to the transmission line could be temporarily reduced by noise and activity during construction and visual impacts from the transmission line (located outside of the wilderness area) would not be mitigated. Section 3.12 has additional information on visual impacts and proposed mitigations for this area, which include the use of selective vegetation removal in pinyon and juniper vegetation communities.

National Historic Trails

Trail Crossings. Alternative III-B would cross the Old Spanish NHT northern route about 22 miles southwest of Moapa, Nevada, four miles northeast of the I-15/US-93 intersection, and 7 miles west of the Muddy Mountains. In this area, the alignment for Alternative III-B would travel in a southern direction, crossing the mapped location of the Old Spanish NHT northern route about three miles east of I-15, after which the alignment would turn and head in a southwesterly direction. The alignment would be next to three existing transmission lines and would be within a designated utility corridor. The crossing would occur on a segment of the Old Spanish NHT northern route near the California Crossing AU that has not inventoried.

Development of Alternative III-B would further define this crossing as a utility corridor and may reduce the scenic quality of the associated setting, particularly during construction, but development would be consistent with existing transmission lines and scenic quality is already low in this area. There are no known historic or interpretive sites located near the crossing, and the area in the immediately vicinity of the crossing is not conducive to interpretation due to a lack of existing roads.

Viewshed Impacts. The project would be visible from approximately 38 miles of the Old Spanish NHT northern route. This includes mileage within the Mormon Mesa and California Crossing AUs, as well as mileage on BLM and USFS lands that has not been inventoried. **Table 3.15-16** summarizes key features of trail segments that would be in the Alternative III-B viewshed.

Within the Mormon Mesa AU, the viewshed would include approximately 5 miles of trail segments categorized as NHT-I (location verified, evident, and unaltered), and 0.2 mile of trail segment categorized as NHT-II (location verified and evident with minor alteration). Impacts would be similar to those describe under Alternative III-A for the Mormon Mesa AU, but would be reduced because the alignment would parallel three existing transmission line within and near this AU (including the location where it would cross the Meadow Valley Wash and Muddy River), thus consolidating the linear features that would degrade the setting of the of the Old Spanish NHT northern route and leaving more opportunity for preservation or interpretation outside of the viewshed.

Table 3.15-16 Alternative III-B Visibility Impacts by Old Spanish NHT Analysis Unit

AU	Segment Rating	Number of Segments	Contributing Status	Miles of Trail within Viewshed[1]	Total Mileage within AU	Percentage of AU within Viewshed
Mormon Mesa (Las Vegas FO; (12 miles total)	Highest rating within AU (NHT-I; exceptional)	2	1 eligible, one unevaluated	5	8	63
	Remaining mileage	3	Unevaluated	0.2	4	5
California Crossing (Las Vegas FO; 3 miles total)	Highest rating within AU (NHT-II; exceptional)	1	Unevaluated	1	1	100
	Remaining mileage	0	NA	0	2	0
BLM Southern Nevada District Office t		NA	Unknown	32	NA	NA

[1] Visibility of Alternative III-B from the historic trail is based on the 5-mile viewshed.

Within the California Crossing AU, the viewshed would include approximately 1 miles of trail segment categorized as NHT-II (location verified and evident with minor alteration). Impacts would be similar to those describe under Alternative III-A for the Mormon Mesa AU, but would be reduced because the alignment would parallel three existing transmission line within and near this AU.

Impacts to the remaining 32 miles of Old Spanish NHT northern route segments within the BLM Southern Nevada District Office that are not inventoried are assumed to be similar to those described under the Mormon Mesa and California Crossing AUs. Scenic quality ratings in these areas (which are average to low, Class B and C), would not be reduced.

Collectively, these impacts from Alternative III-B would not preclude development of a management corridor for the northern route of the Old Spanish NHT, since the development of a transmission line would be consistent with the existing conditions and opportunities for effective trail interpretation would still exist in areas of higher setting integrity.

Section 3.12, Visual Resources identifies mitigation measures to reduce visual impacts, including the use of BLM environmental colors, locating structures, roads, and other project elements as far back from road, trail, and river crossings as possible, and, where feasible, employing terrain and vegetation to screen views from crossings.

Alternative III-C

Alternative III-C would cross the Desert NWR, USFWS Proposed Wilderness #1, USFWS Proposed Wilderness #3, USFWS Unit 3 Sheep Range Proposed Wilderness, and the Coyote Springs ACEC. The refined transmission corridor also would include portions of one additional NWR not crossed by the alignment and occur adjacent to one Wilderness Area. The area outside the refined transmission corridor in which roads or construction support areas could be located would include portions of two additional areas of proposed wilderness. There would be no impacts to USFS SDAs.

BLM SDAs

Coyote Springs Valley ACEC. Within the BLM Las Vegas FO, approximately 24 miles of the alignment and refined transmission corridor would cross the 75,500-acre Coyote Springs Valley ACEC. To protect desert tortoise, the ACEC is managed as a ROW avoidance area outside the designated utility corridor. The refined transmission corridor would generally be confined to the designated utility corridor, but includes a small amount of ROW avoidance areas in the northwest portion of the ACEC, by Coyote Springs. As currently mapped, the alignment and 250-foot-wide transmission line ROW remain within the

designated utility corridor. Modeled disturbance calculations estimate 574 acres (less than 1 percent of the ACEC) of ROW vegetation removal, 297 acres of construction surface disturbance, and 58 acres of operations disturbance. These acreages assume that there is potential for some portions of ROW clearing, tower sites, roads, and/or construction support areas to move outside of the ACEC as site-specific adjustments are made. If the 250-foot-wide transmission line ROW does not shift, there would be approximately 726 acres (1 percent of the ACEC) of ROW vegetation removal and/or surface disturbance areas. All of these activities could affect desert tortoise or other special status species habitat. Adherence to agency stipulations regarding desert tortoise and development of a desert tortoise mitigation plan would reduce impacts to desert tortoise within the corridor during construction. Of the modeled acreages, there is potential for an estimated 5 acres of ROW clearing, and 36 and 14 acres of construction and operation acreages, respectively, to extend beyond the designated utility corridor and into ROW avoidance areas. Construction in these areas would be inconsistent with SDA management stipulations. Application of **SDA-3** would limit ROW development, road construction, and development of construction support areas to only those areas within the existing designated utility corridor; application of **SDA-2** (full road reclamation) would reduce the final operations disturbance acreage and corresponding losses of desert tortoise habitat within the designated utility corridor. However, all ROW vegetation removal and construction surface disturbances acreages described above would still occur. Application of **SDA-5** is proposed to further reduce impacts to desert tortoise habitat by limiting the amount of initial and ongoing ROW vegetation maintenance through selective vegetation removal techniques (also see Section 3.6 for mitigation related to desert tortoise critical habitat).

Delamar Mountain Wilderness Area. As currently mapped, the alignment and 250-foot-wide transmission line ROW would not cross any other BLM SDAs; however, the refined transmission corridor would be adjacent to the Delamar Mountain Wilderness Area. The Ely District RMP has identified all designated wilderness as ROW exclusion areas. TransWest's commitment to comply with agency stipulations (TWE-1) and/or implementation of **SDA-1** and **SDA-2** would eliminate potential impacts within the wilderness area; however, the wilderness quality in the areas closest to the transmission line could be temporarily reduced by noise and activity during construction and visual impacts from the transmission line (located outside of the wilderness area) would not be mitigated. Section 3.12 has additional information on visual impacts and proposed mitigations for this area.

USFWS- Managed National Wildlife Refuges and Proposed Wilderness

Desert NWR. Alternative III-C would cross approximately 20 miles of the 1.5 million-acre Desert NWR. The NWR was established for the protection, enhancement, and maintenance of desert bighorn sheep. As part of the Lincoln County Conservation, Recreation, and Development Act (LCCRDA) of 2004 (P.L. 108–424), administrative jurisdiction over approximately 8,382 acres of land along the eastern boundary of Desert NWR and west of US-93 was transferred from the USFWS to the BLM for use as a utility corridor. The alignment, 250-foot-wide transmission line ROW, and refined transmission corridor would be confined to this utility corridor. Modeled disturbance calculations estimate 603 acres (less than 0.1 percent of the NWR) of ROW vegetation removal, 283 acres of construction surface disturbance, and 51 acres of operations disturbance. All of these activities have the potential to impact desert bighorn sheep and their habitat. Of the disturbance acreages, approximately 59 and 26 acres of construction and operation disturbance, respectively, have the potential to extend beyond the designated utility corridor and into portions of the NWR that were not designated for these uses by the LCCRDA. Adherence to design features, agency BMPs, and wildlife mitigation identified in Section 3.7, Wildlife, would reduce impacts to wildlife species within the NWR. Development of roads is not prohibited within the NWR outside of the proposed wilderness areas, but would result in surface disturbance, noise, and activity that would impact NWR values. Application of **SDA-3** would reduce impacts to the NWR by limiting road construction and support area development to only those areas within the designated utility corridor; however, surface disturbance and activities that could affect desert bighorn sheep in this area would still occur within the corridor. Application of **SDA-2** (full road reclamation) would reduce operation impacts to wildlife species within the NWR.

USFWS Proposed Wilderness #3 and Unit 3 Sheep Range Proposed Wilderness. Alternative III-C would cross three areas of the Desert NWR proposed by the USFWS for wilderness designation. The alignment and refined transmission corridor would cross 4 miles of the 7,633-acre USFWS Proposed Wilderness #1, 4 miles of the 21,969-acre USFWS Proposed Wilderness #3, and 8 miles of the 375,458-acre Unit 3 Sheep Range Proposed Wilderness. As discussed under Desert NWR, above, the refined transmission corridor, alignment and 250-foot-wide transmission line ROW would be located in a LCCRDA designated utility corridor. Modeled disturbance calculations estimate 204, 26, and 142 acres of ROW vegetation removal areas; 87, 30, and 71 acres of construction surface disturbances; and 13, 7, and 14 acres of operation disturbances, within the Proposed Wilderness #1, Proposed Wilderness #3, and Unit 3 Sheep Range Proposed Wilderness areas, respectively. Modeled ROW clearing would be 3 percent of USFWS Proposed Wilderness #1 and less than 0.1 percent of the USFWS Proposed Wilderness #3 and Unit 3 Sheep Range Proposed Wilderness areas. These acreages assume that there is potential for some portions of ROW clearing, tower sites, roads, and/or construction support areas to move outside of the proposed wilderness areas as site-specific adjustments are made. If the 250-foot-wide transmission line ROW does not shift from its current mapped location, there would be approximately 121 acres (2 percent) of ROW vegetation removal and/or surface disturbance within the Proposed Wilderness #1, 129 acres (0.6 percent) within the Proposed Wilderness #3 (0.6 percent), and 233 acres (less than 0.1 percent) within the Unit 3 Sheep Range Proposed Wilderness area. Of the modeled acreages, between 10 and 20 acres of construction disturbance and less than 10 acres of operation disturbance are estimated to have potential to extend beyond the designated utility corridor. Development of roads or use of motorized vehicles within this portion of the refined transmission corridor would not be compatible with area management. Application of **SDA-3** would reduce impacts to these proposed wilderness areas by limiting road construction and support area development to only those areas within the designated utility corridor. Application of **SDA-2** (full road reclamation) would further reduce operation impacts to wilderness qualities within these areas of roads construction, but the visual impacts of the transmission line would remain (see Section 3.12 for visual impacts).

Pahranagat NWR. As currently mapped, the alignment and 250-foot-wide transmission line ROW would not cross the 5,380-acre Pahranagat NWR; however, portions of the refined transmission corridor would be within the NWR. The NWR provides habitat for migratory birds, especially waterfowl. Development of roads is not prohibited within the NWR. Most, but not all refined transmission corridor areas within the NWR would be within a designated utility corridor. Modeled disturbance calculations estimate 13 acres (less than 0.2 percent of the NWR) of ROW vegetation removal, 6 acres of construction surface disturbance, and 1 acre of operations disturbance. Adherence to design features and agency BMPs to protect migratory birds would reduce impacts to wildlife resources within the NWR. Wildlife mitigation identified in Section 3.7, Wildlife, and Section 3.8, Special Status Wildlife Species, also would reduce impacts to shorebirds and other migratory bird species. Application of **SDA-1** is proposed to ensure that the 250-foot-wide transmission line ROW is not relocated within the SDA during subsequent micro-siting efforts associated with development of the POD. Application of **SDA-3** would reduce impacts to the NWR by limiting road construction and support area development to only those areas within the designated utility corridor; however, surface disturbance and activities that could affect migratory birds would still occur within the corridor. Application of **SDA-2** (full road reclamation) would reduce operation impacts to wildlife species within the NWR.

Fish and Wildlife Proposed Wilderness #2 and Unit 2 Las Vegas Range Proposed Wilderness. While not crossed by the refined transmission corridor, the area in which roads or construction support areas could be located would include portions of two additional proposed wilderness areas (Fish and Wildlife Proposed Wilderness #2 and Unit 2 Las Vegas Range Proposed Wilderness) that are not crossed by the refined transmission corridor. Modeled disturbance calculations identify the potential for up to 18 acres of construction surface to occur within Fish & Wildlife Proposed Wilderness #2 (8 acres of which would be permanent), and less than 1 acre of disturbance within Unit 2 Las Vegas Range Proposed Wilderness. These disturbances have potential to extend beyond the designated utility corridor. Application of **SDA-1** is proposed to ensure that the 250-foot-wide transmission line ROW itself is not relocated within these

SDAs during subsequent micro-siting efforts associated with development of the POD. Application of **SDA-3** would reduce impacts to the proposed wilderness areas by limiting road construction and support area development to only those areas within the designated utility corridor; however, surface disturbance and activities that could affect wilderness characteristics would still occur within the corridor. Application of **SDA-2** (full road reclamation) would further reduce operation impacts within the proposed wilderness areas, but these areas would still include portions of the transmission line viewshed (see Section 3.12, Visual Resources).

National Historic Trails

Trail Crossings. Alternative III-C would cross the Old Spanish NHT northern route near the far south end of Region III, about 4 miles east of the I-15/US-93—SR-604/N. Las Vegas Boulevard intersection and 7 miles southwest of the Muddy Mountains. In this area, the alignment for Alternative III-C would travel in a southeast direction, crossing the mapped location of the Old Spanish NHT northern route about 1 mile east of I-15, after which the alignment would turn and head south adjacent to an existing transmission line. Both portions of the alignment would be within designated utility corridors, but there is currently no existing transmission line in the east-west corridor. The crossing would be about 1 mile north of an existing paved road and railroad line, and 4 miles south of an existing mining operation. The crossing would occur on a segment of Old Spanish NHT northern route that the BLM Southern Nevada District Office has not mapped. There is no information about trail condition, NTSA values, or the contribution of the segment to overall trail NRHP eligibility. Development of Alternative III-C would define the east-west crossing as a utility corridor and introduce a linear feature where none currently exists. This would reduce the scenic quality of the associated setting, but scenic quality is already low in this area. There are no known historic or interpretive sites located near the crossing. Additionally, the paved road cannot be accessed by I-15/US-93, which may further limit opportunities for cultural tourism.

Viewshed Impacts. Alternative III-C would be visible from 6 miles of the Old Spanish NHT northern route. Development of Alternative IV-C's north-south linear corridor would be consistent with existing setting; development of the east-west corridor (where the alignment would cross the Old Spanish NHT) would introduce a linear feature with strong contrasts where none currently exists; however overall scenic quality is already low in this area. There are no known historic or interpretive sites located within the viewshed, and the area in the immediately vicinity of the crossing is not conducive to interpretation due to existing utility line and mining development and low setting integrity. Additionally, the paved road cannot be accessed by I-15/US-93, which may further limit opportunities for cultural tourism.

Cumulatively, these impacts would not preclude development of a management corridor for the northern route of the Old Spanish NHT, since the development of a transmission line would be consistent with area management and opportunities for effective trail interpretation would still exist in areas of higher setting integrity.

Section 3.12, Visual Resources, identifies mitigation measures to reduce visual impacts, including the use of BLM environmental colors, locating structures, roads, and other project elements as far back from road, trail, and river crossings as possible, and, where feasible, employing terrain and vegetation to screen views from crossings.

Alternative III-D

Alternative III-D would cross the Mormon Mesa-Ely (BLM Caliente FO) and Mormon Mesa (BLM Las Vegas FO) ACECs, Muddy River WSR, and the Meadow Valley Wash WSR, and would cross a portion of the Old Spanish NHT. The area outside the refined transmission corridor in which roads or construction support areas could be located would include one additional ACEC and occur adjacent to one wilderness area. Impacts to these SDAs would be the same as under Alternative III-B. There would be no impacts to USFS SDAs.

Alternative Variations in Region III

The SDAs crossed by the alternatives in Region III and other key impact parameters are summarized in **Table 3.15-17**. **Appendix H** contains a more information on the existing conditions of the IRAs and URUD areas crossed by the alternative variations. Additional information regarding Project impacts can be found in the IRA/URUD area worksheets contained in the Project Record.

Table 3.15-17 Impact Parameters of Alternative Variations and Comparative Portions of Alternatives in Region III

Ox Valley East Alternative Variation	Comparable (Portions of Alt III-A)	Ox Valley West Alternative Variation	Comparable (Portions of Alt III-A)	Pinto Alternative Variation	Comparable (Portions of Alt III-A)
IRA and URUD Areas					
Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)	**Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)**	**Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)**	**Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)**	**Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)**	**Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)**
IRAs: Gum Hill IRA: 1 /35 / 7 / 5 / 1 Mogotsu IRA: <0.25 / 7 / 1 / 1 / 0 Moody Wash IRA: 0 / 0 / 10 / 8 / 2	IRAs: Atchinson IRA: 1 /45/ 8 / 7 / 2 Cove Mtn IRA: 2 / 53 / 6 / 5 / 1 Mogotsu IRA: 1 / 27 / 12 / 10 / 2	IRAs: Gum Hill IRA: 0 / <1 / 7 / 5 / 1 Moody Wash IRA: 0 / 0 / 10 /8 / 2	IRAs: Atchinson IRA: 1 / 45 / 8 / 7 / 2 Cove Mtn IRA: 2 / 53 / 6 / 5 / 1 Mogotsu IRA: 1 / 27 / 12 / 10 / 2	IRAs: None	IRAs: Atchinson IRA: 1 / 45 / 8 / 7 / 2 Cove Mtn IRA: 3/ 83 /11 / 9 / 2 Mogotsu IRA: 1 / 27 / 12 / 10 / 2
URUD areas: Moody Wash/Mogotsu: 9 / 270 / 164 / 176 / 66	URUD areas: Atchinson: 4 / 749 / 37 / 34 / 9 Cove Mountain: 1 / 121 / 6 / 7 / 2 Moody Wash/Mogotsu: 1 / 27 / 13 / 14 / 4	URUD areas: Moody Wash/Mogotsu: 9 / 273 / 165 / 176 / 65	URUD areas: Atchinson: 4 / 749 / 37 / 34 / 9 Cove Mountain: 1 / 121 / 6 / 7 / 2 Moody Wash/Mogotsu: 1 / 274 / 13 / 13 / 4	URUD areas: Kane Mountain 2 / 55 / 8 / 10 / 3 Pine Valley Mtn: 3 / 83 / 21 / 35 / 12 Cove Mountain 0 / 4 / 0 / 2 / 1 Atchinson: 0 / 3 / 0 / 18 / 8	URUD areas: Atchinson: 4 / 749 / 37 / 34 / 9 Cove Mtn: 2 / 207 / 11 / 9 / 2 Moody Wash/Mogotsu: 1 / 215 / 10 / 10 / 2
Historic Trails					
Old Spanish NHT: 1 trail crossing, 7 miles of trail within viewshed, Mountain Meadows NHL and Site located 3 miles from the transmission line	Old Spanish NHT: 2 trail crossings, 13 miles of trail within viewshed, Mountain Meadows NHL and Site located 0.1 mile from the transmission line	Old Spanish NHT: 1 trail crossing, 7 miles of trail within viewshed, Mountain Meadows NHL and Site located 3 miles from the transmission line	Old Spanish NHT: 2 trail crossings, 13 miles of trail within viewshed, Mountain Meadows NHL and Site located 0.1 mile from the transmission line	Old Spanish NHT: 0 trail crossing, 0 miles of trail within viewshed, Mountain Meadows NHL and Site located 8 miles from the transmission line	Old Spanish NHT: 2 trail crossings, 13 miles of trail within viewshed, Mountain Meadows NHL and Site located 0.1 mile from the transmission line

Note: See Introduction to Section 3.15.4 for an explanation of how the combination of impact indicators describes the SDA location in relation to the alignment, 250-foot-wide transmission line ROW, refined transmission corridor, and area outside of the refined transmission corridor in which roads or construction support areas may be located. For more information about disturbance modeling, please see Section 3.1.

Alternative Connectors in Region III

The Moapa, Avon and Arrowhead Alternative Connectors would not cross any SDAs in Region III. The Moapa Alternative Connector would be visible from the Old Spanish NHT for approximately 1 mile. The 1-mile segment is categorized as NHT II (location verified and evident with minor alteration).

Alternative Ground Electrode Systems in Region III

A ground electrode system of approximately 600 acres in size would be necessary in Region III within 50 to 100 miles of the southern terminal, as discussed in Chapter 2.0. Although the location for this system has not been determined, conceptual locations and connections to the alternative routes have been provided by the Project Applicant. The ground electrode system alternative locations that would be in Region III are depicted in Chapter 2.0 in **Figure 2-23**. The conceptual sites themselves would not cross any SDAs; however, portions of the siting area include portions of eligible WSR segments, one ACEC, and the Old Spanish NHT.

The Mormon Mesa-Carp Elgin Road ground electrode system siting area (proposed for use under Alternatives III-A, III-B, and III-D) would encompass approximately 4 miles (5 segments) of the Old Spanish NHT and the associated access road and transmission line would parallel another 4 miles (2 trail segments). Application of **SDA-4** would eliminate direct impacts to the trail from the ground electrode system but would not reduce setting impacts from the ground electrode system, access road and transmission line. The majority of the mileage is rated as NHT-I and two of the five segments within the siting area are eligible for the NRHP. Impacts would be similar to those described under Alternative III-A; however, the presence of a ground electrode system would not be expected to reduce the current Class B scenic quality rating or the current SI overall rating for portions of the AU within the viewshed.

The Meadow Valley ground electrode system siting area (proposed for use under Alternative III-C) would include 406 acres within a portion of the Meadow Valley Wash riparian system eligible for inclusion as a WSR under a “scenic” designation. Development of a ground electrode site within this area would not be consistent with the criteria for a “scenic” designation (largely primitive and undeveloped, no substantial evidence of human activity, etc.). There would be potential for an estimated 9 acres of construction disturbance and 3 acres of operations disturbance to occur within this area. Additionally, the low voltage connector line for the Meadow Valley ground electrode system siting area would cross approximately 5 miles of the Mormon Mesa ACEC. The ACEC is managed as a ROW avoidance area outside of designated utility corridors to protect critical desert tortoise habitat. The connector line would not be located within a designated utility corridor. Modeled disturbance calculations estimate less than 1 acre of disturbance within the ACEC. Impacts to the outstandingly remarkable values (wildlife, cultural, and fish) of the eligible wash segment would be reduced by design features and agency BMPs, including riparian habitat and sensitive species habitat buffers and BMPs to reduce potential for erosion and sedimentation that could affect fish habitat. Potential impacts to cultural resources from surface disturbance would be mitigated through compliance with the Project PA. Application of **SDA-4, SDA-1**, and **SDA-2** is proposed to site the ground electrode system outside of the ACEC and the suitable river segment/riparian areas; reduce or limit road development within the ACEC and within the WSR-eligible segment; and/or require road reclamation where avoidance is not practicable. However, the low voltage connector lines connecting the ground electrode site to the Alternative III-C transmission line would still cross the ACEC and the WSR-eligible segment and the visual impacts of those crossings would not be mitigated. Application of **SDA-14** would require micro-siting of facilities to further minimize surface disturbance or visual disturbance to the segment’s outstandingly remarkable values.

Region III Series Compensation Stations (Design Option 2)

If Design Option 2 were implemented, a series compensation station would be necessary along the AC-configured alternative routes of Region III. There are three potential sites, each corresponding to a

specific alternative route. These series compensation station alternatives are depicted in **Figure 2-2**. There are no SDAs near any of the potential series compensation station locations.

Region III Conclusion

All alternatives within Region III would result in similar mileage impacts to SDAs designated by the BLM for the protection of desert tortoise with (24 to 26 miles). Under Alternative III-A, approximately 5 miles of impacts would be in Utah SDAs; Alternatives III-B, III-C, and III-D would impact desert tortoise habitat SDAs only in Nevada. Alternative III-C would have the greatest vegetation ROW clearing acreages (574 acres) and construction disturbances (297 acres). Alternatives III-A, III-B, and III-D would have similar amounts of ROW clearing (both over 50 percent less than Alternative III-C) and construction disturbance (40 to 60 acres less than Alternative III-C), but Alternative III-A would have twice as much operations (permanent) disturbances as Alternatives III-B and III-D.

Alternative III-A would cross three USFS IRAs and URUD areas and one WSR-eligible segment. Alternative III-C would cross one USFWS Wildlife Refuge and three proposed wilderness areas. Alternatives III-B and III-D would not affect any USFS or USFWS SDAs, but would have the most impacts to WSRs, crossings two segments eligible for inclusion into the NWSRS.

Alternative III-A would have the greatest impact on NHTs, crossing 2 to 4 segments of the Old Spanish NHT and affecting the viewshed of approximately 53 miles of the Old Spanish NHT. Crossings of the trail route and important aspects of the associated setting (Meadow Valley Wash and the Muddy River) would not be adjacent to existing transmission lines. Alternatives III-B and III-D would cross one segment of the Old Spanish NHT and would affect 38 miles of the trail viewshed; however, the alignment would be adjacent to existing transmission lines where it crosses the trail, Meadow Valley Wash, and the Muddy River. Alternative III-C would have the least impact to the Old Spanish NHT, crossing one segment south of the Meadow Valley Wash and the Muddy River and affecting the viewshed of 6 miles of the Old Spanish NHT trail route. Once the final route is selected, an intensive Class III inventory and in-depth setting analysis would be conducted to determine the impact to contributing Old Spanish NHT trail segments crossed by the route or from which the route would be visible. If contributing segments would be adversely affected, the effects would be minimized or mitigated onsite or offsite as stipulated in the mitigations proposed in Section 3.11, Cultural Resources (**CUL-1**), as stipulated in the Cultural Resources PA developed for the Project, and through implementation of Design Features and BMPs in concert with the NPS and the Nevada BLM National Trails Management Program Lead.

Impacts to SDAs would be reduced through application of mitigation, including the avoidance of road construction, development of desert tortoise conservation plans, etc., but the impacts of a constructed transmission line (primarily visual impacts, temporary and permanent loss of critical desert tortoise habitat, and degradation of wilderness qualities) would remain.

3.15.6.6 Region IV

Table 3.15-18 provide a list of the Region IV SDAs that would be within the refined transmission corridor as well as those SDAs that would be outside of the refined transmission corridor but within areas in which temporary construction support areas or temporary or permanent roads could be constructed. For more information on the surface disturbance model, please see Section 3.1. These areas also are depicted in **Figures 3.15-4**, **3.15-8**, and **3.15-12**.

Table 3.15-18 Region IV: SDAs within Areas of Potential Impact

Special Designations Area	Alternative IV-A Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)	Alternative IV-B Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)	Alternative IV-C Align. (mi) / 250-ft ROW (ac) Veg removal / constr. / oper. disturb. (ac)
Sloan Canyon NCA (Las Vegas FO)	0 / 0 0 / 0 / 0	N/A	N/A
Rainbow Gardens ACEC (Las Vegas FO)	11 / 277 200 / 146 / 36	3 / 63 42 / 30 / 7	3 / 63 42 / 30 / 7
River Mountains ACEC (Las Vegas FO)	5 / 116 78 / 56 / 15	0 / 0 0 / 1 / 0	N/A
Lake Mead NRA (NPS)	0 / 0 0 / <0.2/ <0.1	14 / 427 282 / 204 / 57	14 / 414 304 / 212 / 56
Old Spanish NHT (BLM/NPS)			
Number of crossings and segment rating	2 segments crossed (eligibility unknown)	3 segments crossed (eligibility unknown)[1]	3 segments crossed (eligibility unknown)[1]
Visibility of the alternative from the Old Spanish Trail	36 miles: 5 miles Northern route; 23 miles Mojave route and 8 miles Armjio route	38 miles: 5 miles Northern route; 20 miles Mojave route and 13 miles Armjio route	38 miles: 5 miles Northern route; 20 miles Mojave route and 13 miles Armjio route
Associated Historic Sites and natural features, and nearby recreation or interpretive features	Clark County Wetlands Park, Las Vegas Wash, River Mountain Loop Trail	Las Vegas Wash, River Mountain Loop Trail, Lake Mead NRA	Las Vegas Wash, River Mountain Loop Trail, Lake Mead NRA
Management/Land Use	Clark County Wetlands Park and BLM lands; within a WWEC- designated utility corridor	NPS land (Lake Mead NRA) and private lands; not within a designated utility corridor	NPS land (Lake Mead NRA) and private lands; not within a designated utility corridor

Note: See Introduction to Section 3.15.4 for an explanation of how the combination of impact indicators describes the SDA location in relation to the alignment, 250-foot-wide transmission line ROW, refined transmission corridor, and area outside of the refined transmission corridor in which roads or construction support areas may be located. For more information about disturbance modeling, please see Section 3.1.

River Mountains ACEC. Approximately 5 miles of the alignment and refined transmission corridor would fall within the 5,617-acre River Mountains ACEC. This ACEC was designated to protect bighorn sheep habitat and the scenic viewshed for Henderson and Boulder City and is a ROW avoidance area outside of designated utility corridors. The refined transmission corridor would be fully within the designated utility corridor through the ACEC; therefore, it would be compatible with SDA management. Modeled disturbance calculations estimate 78 acres of ROW vegetation removal (1.4 percent of the ACEC), 56 acres of construction surface disturbance and 15 acres of operations disturbance within the ACEC. These acreages assume that there is potential for some portions of ROW clearing, tower sites, roads, and/or construction support areas to move outside of the ACEC as site-specific adjustments are made. Of the modeled disturbance acreages, there is potential for an estimated 13 and 9 acres of construction and operation disturbance, respectively, to extend beyond the designated utility corridor into ROW avoidance areas. If the 250-foot-wide transmission line ROW does not shift, there would be approximately 116 acres (2 percent) within the ACEC subject to ROW vegetation removal and/or surface disturbance. Construction areas would be temporarily removed from use by wildlife; during peak construction, it is likely that bighorn sheep would be temporarily displaced from a larger area than the actual disturbance sites due to the avoidance response (see Section 3.7 for impacts on wildlife). The potential for construction of 13 acres of road and construction support areas outside of the designated utility corridor would further expand the area affected by surface disturbance and habitat loss, construction noise, and human activity. ACEC management actions would require the reclamation of all

temporary roads and TransWest's commitment to implement seasonal restrictions to mitigate impacts on wildlife would assist in reducing impacts to bighorn sheep; however, there still would be some permanent loss of habitat and habitat fragmentation from permanent roads. Application of **SDA-1, SDA-2,** and **SDA-3** would limit surface disturbance within the ACEC to the acreage required for the transmission line itself, and/or restrict new road development to only those areas within the designated utility corridor, and require full reclamation of roads outside the designated utility corridor to reduce the long term impacts of road development to scenic values. Application of **SDA-5** is proposed in this SDA to further mitigate habitat loss and impacts to scenic values; however, the vegetation type is low enough that full vegetation removal may not be required and selective vegetation maintenance would not mitigate impacts of the transmission line itself.

Alternative IV-A (Applicant Proposed and Agency Preferred)

Alternative IV-A would cross the Rainbow Gardens ACEC and the River Mountains ACEC within the BLM Las Vegas FO, and would cross two segments of the Old Spanish NHT. The area outside the refined transmission corridor in which roads or construction support areas could be located would include one NRA and would be adjacent to one NCA.

BLM SDAs

Rainbow Gardens ACEC. Approximately 11 miles of the alignment and refined transmission corridor would fall within the 37,620-acre Rainbow Gardens ACEC. This ACEC was established to protect geological, scientific, scenic, cultural, and sensitive plant values and is a ROW avoidance area outside of designated utility corridors. Of these 11 miles, all but about 2 miles of the refined transmission corridor and the present location of the alignment and 250-foot-wide transmission line ROW would be within BLM- or WWEC-designated utility corridors. As a ROW avoidance area, development of a transmission line would still be permitted under SDA management; however, land management actions for the Sunrise Mountain SRMA, which overlays the ACEC entirely, has a management goal to concentrate major transmission line ROWs to the confines of the designated utility corridor to reduce conflicts with recreation and impacts to scenic resources (BLM 1998; Section 3.13, Recreation Resources). Modeled disturbance calculations estimate 200 acres (0.5 percent of the ACEC) of ROW vegetation removal, 146 acres of construction surface disturbance and 36 acres of operations disturbance within the ACEC. These acreages assume that there is potential for some portions of ROW clearing, tower sites, roads, and/or construction support areas to move outside of the ACEC as site-specific adjustments are made. If the 250-foot-wide transmission line ROW does not shift, there would be approximately 277 acres (1 percent of the ACEC) of ROW vegetation removal and/or surface disturbance. Of the modeled acreages, an estimated 24 acres of ROW clearing, 48 acres of construction disturbance and 22 acres of operations acreage would be outside designated utility corridors and within ROW avoidance areas. Vegetation and surface disturbance could affect geological, scenic, cultural, or sensitive plant values. ACEC management actions would require the reclamation of all temporary roads constructed within the ACEC, which would reduce the acreage of permanent disturbance. Agency-designated avoidance buffers in occupied special status species habitat (see **Appendix C**) would reduce impacts to the sensitive plant values for which the ACEC is managed. Surface disturbance could potentially impact Class III geological and paleontological resources (Section 3.2, Geological, Paleontological, and Mineral Resources); impacts would be mitigated through compliance with design features and agency BMPs, including development of a paleontological resources mitigation plan for areas known to contain paleontological resources or in areas of high potential for paleontological resources(see **Appendix C**). Adherence to the Project PA would mitigate impacts to cultural resources. There are already several existing transmission lines through the Rainbow Gardens ACEC. In areas not within the viewshed of existing transmission structures, this alternative would not comply with BLM VRM Class III management objectives for the ACEC (Section 3.12, Visual Resources). Application of **SDA-1, SDA-2**, and **SDA-3** would limit surface disturbance within the ACEC to the acreage required for the transmission line itself, and/or restrict new road development to only those areas within the designated utility corridor where possible, and require full reclamation of roads outside the designated utility corridor to reduce the long

term impacts of road development to scenic values. However, impacts from the transmission line itself would not be mitigated. Application of **SDA-5** is proposed to further mitigate visual impacts; however, the vegetation type is low enough that full vegetation removal may not be required. Section 3.12, Visual Resources, also includes additional mitigation for areas that are adjacent to existing transmission lines, such as matching tower placement and ROW clearing methods.

Sloan Canyon NCA. Under Alternative IV-A, the refined transmission corridor and analysis area would not cross the Sloan Canyon NCA; however, construction activities would occur adjacent to the NCA boundary. The 48,800-acre Sloan Canyon NCA is managed to conserve, protect, and enhance the cultural, archaeological, natural, wilderness, scientific, geological, historical, biological, wildlife, educational, and scenic resources of this area. Portions of the NCA adjacent to the analysis area are managed as semi-primitive, non-motorized areas and are classified as VRM Class II. The quality of the uses in the area closest to the refined transmission corridor would be temporarily reduced from construction noise and activity and the NCA would still have visual impacts from the development of the transmission line adjacent to the NCA boundary. Impacts to Recreation within the NCA are discussed in Section 3.13 and impacts to Visual Resources in this area are discussed in Section 3.12.

Lake Mead NRA

Under Alternative IV-A, no portions of the refined transmission corridor would be within the Lake Mead NRA; however, a small portion of the area outside the refined transmission corridor in which some roads and construction support areas could occur would be located within an environmental protection subzone of the NRA, and there is modeled potential for less than 1 acre of construction surface disturbance within the NRA, of which a fraction would be permanent. These disturbance areas would be in the far northwest corner of the NRA and would not affect the recreational experiences for which the NRA was designated (Section 3.13, Recreation Resources). BMPs and Design Features related to erosion, sedimentation, and reclamation would minimize impacts from ROW clearing, road, or staging area construction to the resources for which the environmental protection subzone was designated. Impacts would be further minimized by the proposed application of **SDA-1**, which would eliminate any surface disturbance from roads or construction staging areas within the NRA altogether. Impacts to Lake Mead NRA also are discussed In Section 3.13, Recreation Resources, and Section 3.14, Land Use.

National Historic Trails

Alternative IV-A would cross the Old Spanish NHT Armijo and the Mojave routes. The alignment would be visible for 36 miles of the Old Spanish NHT. Viewshed mileage includes portions of the Armijo, Mojave and northern routes. Impacts to each Old Spanish NHT route are discussed in greater detail below.

Armijo Route. Alternative IV-A would cross the Old Spanish NHT Armijo route within the Clark County Wetlands Park AU (see Section 3.15.3.8, Old Spanish NHT Region IV subsection). This AU includes about 6 miles of the Las Vegas Wash, an important perennial water source that influenced the development of travel routes such as the Old Spanish NHT. The crossing would be at the far eastern end of the Wetland Park, about five miles from the Nature Center and about 0.2 miles from the small city park located between the Wetlands Park's eastern boundary and Lake Las Vegas Parkway (and Lake Las Vegas development area). The crossing would be parallel to three existing transmission lines and would be within a WWEC-designated utility corridor. Based on the lack of any physical remains of the Spanish Trail in the Wetlands Park, this segment that would be crossed would likely be a non-contributing segment of the Old Spanish NHT (Bureau of Reclamation 2014). There is a foundation remains of the masonry structure at the eastern end of the Wetlands Park called the "Old Spanish House"; however, none of the artifacts recovered from the interior support the speculation that the structure is affiliated with the Old Spanish NHT (Bureau of Reclamation 2014).

Development of Alternative IV-A would further define this crossing as a utility corridor and may reduce the scenic quality of the associated setting of the Old Spanish NHT Armijo route (i.e., the Las Vegas Wash and the mountains around it), particularly during construction, but development would be consistent with existing transmission lines and scenic quality would not be reduced from current Class A and B ratings. Alternative IV-A would be visible from 8 miles of the Old Spanish NHT Armijo route. This would include the mileage within the eastern half of the Clark County Wetlands Park AU, the adjacent 2-mile Lake Las Vegas AU (where the historic Las Vegas Wash has been subsumed by a man-made lake and planned development) and portions of the East Las Vegas Wash AU where terrain or development at Lake Las Vegas does not block views. Within the Clark County Wetland Park AU, the Nature Center would be largely outside of the viewshed. Section 3.12, Visual Resources, contains mitigation to reduce further visual impacts, such as matching tower spacing to existing transmission lines.

There are no Old Spanish NHT historic or interpretive sites located near the proposed crossing and Clark County Wetlands Park does not currently plan on providing interpretive materials related to the Old Spanish NHT in the future (Clark County 2014). Nonetheless, the Clark County Wetlands Park's focus on depicting pre-settlement conditions of the Las Vegas Wash does provide information that would be important for interpretation of the Old Spanish NHT Armijo route. The development of the Alternative IV-A alignment in conjunction with the three existing transmission lines may reduce the desirability of developing future interpretive signage near the crossing; however, this alternative would not necessarily eliminate all interpretive potential of the Clark County Wetlands Park since the Park's interpretive facilities are generally located at the far western end of the Park, away from the proposed crossing and largely unaffected by the viewshed.

Overall, these impacts would not preclude development of a management corridor for the Armijo route of the Old Spanish NHT since the development of a transmission line would be consistent with the existing conditions, there has been no physical remains of the Old Spanish NHT identified in or near where the alignment would cross the trail, and opportunities for trail interpretation would still exist in both the East Las Vegas Wash AU (which contains the highest setting integrity) and the Clark County Wetlands Park AU.

Mojave Route. Alternative IV-A would cross the Old Spanish NHT Mojave route within the River Mountains AU (see Section 3.15.3.8, Old Spanish NHT Region IV subsection). The crossing would be located on the southwest side of the River Mountains, about 0.6 mile from the edge of the closest residential neighborhood and the closest point of the River Mountains Loop Trail, and about 0.7 mile from the wastewater treatment plant. The crossing would be located on BLM land, and the alignment would parallel existing transmission lines within a WWEC-designated utility corridor. Towers would be placed to avoid surface disturbance near the actual trail and would span natural features associated with the Old Spanish NHT Armijo route. Development of the transmission line may degrade the associated setting of the trail against the western flank of the River Mountains, particularly during construction, but alignment would be consistent with existing transmission lines, and the overall scenic quality would not be reduced from current Class A and B ratings. Alternative II-A would be visible from 23 miles of the Old Spanish NHT Mojave route. This includes all acreage within the River Mountain AU as well portions of the East Las Vegas Wash, River Mountains, and Railroad Pass to Searchlight AUs, where terrain or existing development does not block views. Section 3.12, Visual Resources, contains mitigation to reduce further visual impacts, such as matching tower spacing to existing transmission lines.

There are no known historic or interpretive sites located near the proposed trail crossing; the closest interpretive marker is over 2 miles away in a city park that would not be appreciably impacted by the development of the transmission line. The River Mountains Loop Trail, the closest existing recreation facility that could be used for future site interpretation, would be within the viewshed. Development of the Alternative IV-A alignment in conjunction with the three existing transmission lines may reduce the desirability of developing outdoor interpretive signage along the River Mountains Loop Trail.

Collectively, these impacts would not preclude development of a management corridor for the Mojave route of the Old Spanish NHT, since the development of a transmission line would be consistent with the existing conditions and opportunities for effective trail interpretation would still exist, particularly within the East Las Vegas Wash AU, which contains the highest setting integrity of the three AUs along the Las Vegas Wash.

Northern Route. Although Alternative IV-A would not cross the Old Spanish NHT northern route, the project would be visible from 5 miles of the Old Spanish NHT northern route. Affected mileage would be located the far north edge of Region IV, north of Nellis AFB about 3 miles due east of where I-15/US-93 intersects with SR-604/N. Las Vegas Boulevard. The proposed route for Alternative IV-A would be about 1mile mile from the mapped location of the Old Spanish NHT northern route, an existing railroad track, and a few dirt roads. There are no known historic or interpretive sites located within the viewshed and it is unlikely that one would be developed in this area due to its proximity to the railroad and the lack of passable roads in the area. These visual impacts would not preclude development of a management corridor for the Old Spanish NHT northern route of the Old Spanish NHT.

Alternative IV-B

Alternative IV-B would cross the Rainbow Gardens ACEC, the Lake Mead NRA, and three segments of the Old Spanish NHT. The area outside the refined transmission corridor in which roads or construction support areas could be located would include one additional ACEC.

BLM SDAs

Rainbow Gardens ACEC. Under Alternative IV-B, approximately 3 miles of the alignment and refined transmission corridor would fall within the 37,620-acre Rainbow Gardens ACEC. Less than 1 mile would be within a designated utility corridor. Impacts would be similar in type to Alternative IV-A, but would involve 75 percent fewer modeled acres of ROW vegetation clearing (an estimated 42 acres). Construction and operation surface disturbance would be similarly reduced (to an estimated 30 acres of construction surface disturbance, of which 7 acres would be permanent). However, there would be twice as much surface disturbance located within ROW avoidance areas (an estimated 28 acres of ROW clearing, 24 acres of construction disturbance, and 5 acres of operations acreage). These acreages assume that there is potential for some portions of ROW clearing, tower sites, roads, and/or construction support areas to move outside of the ACEC as site-specific adjustments are made. If the 250-foot-wide transmission line ROW does not shift, there would be 214 fewer acres of ROW vegetation clearing than Alternative IV-A. Mitigation and residual effects would be the same as under Alternative IV-A.

River Mountains ACEC. Under Alternative IV-B, the refined transmission corridor would not enter the River Mountains ACEC; however, the area in which roads or construction areas could be located would include a small portion of the ACEC. Modeled surface disturbance estimate less than 1 acre of construction disturbance would occur within the ACEC, a fraction of which would be permanent. These disturbances would occur in ROW avoidance areas. Impacts from road construction to the relevant and important values of the River Mountains ACEC are discussed under Alternative IV-A. Implementation of **SDA-1** would eliminate potential impacts to the ACEC from the development of access roads and construction support areas.

Lake Mead NRA

Approximately 14 miles refined transmission corridor would fall within the Lake Mead NRA. The refined transmission corridor would not be in a designated utility corridor. Modeled disturbance calculations estimate 282 acres of ROW vegetation removal (less than 0.1 percent of the ACEC) and 204 acres of construction surface disturbance, of which 57 acres would be permanent. These acreages assume that there is potential for some portions of ROW clearing, tower sites, roads, and/or construction support areas to move outside of the NRA as site-specific adjustments are made. If the 250-foot-wide

transmission line ROW does not shift, approximately 427 acres would be subject to ROW vegetation removal and/or surface disturbance. This would still less than 0.1 percent of the NRA. These disturbances would occur in developed access areas and scenic driving corridors within the Boulder Basin Zone offering year-round recreational opportunities for boating, fishing, hiking, photography, picnicking and sightseeing, primarily for day use recreation (Section 3.13, Recreation Resources). Development of a new utility ROW also would be inconsistent with the designations of the NRA GMP, which opposes utilities outside of designated utility corridors. Application of **SDA-1** and **SDA-2** would limit surface disturbance within the NRA to the acreage required for the transmission line itself and/or require full reclamation of roads to reduce the long term impacts of road development to scenic values. Proposed mitigation would reduce impacts to recreational activities; however, the visual impacts to the Class A scenery of the area would not comply with Lake Mead NRA management objectives and would result in permanent adverse impacts to the recreation setting in the area. Application of **SDA-5** is proposed in this SDA to further mitigate visual impacts; however, the vegetation type is low enough that full vegetation removal may not be required and selective vegetation maintenance would not mitigate impacts of the transmission line itself (Section 3.12, Visual Resources). This residual impact would not meet the “no impairment’ standard to which NPS lands are held. Additionally, a practicable alternative to crossing the Lake Mead NRA does exist (Alternative IV-A). Impacts to NRA visual resources and recreation are discussed in more detail in Section 3.12, and Section 3.13, respectively.

National Historic Trails

Alternative IV-B would cross the Old Spanish NHT Armijo and the Mojave routes. The alignment would be visible for 38 miles of the Old Spanish NHT. Viewshed mileage includes portions of the Armijo, Mojave, and northern routes. Impacts to each Old Spanish NHT route are discussed in greater detail below.

Armijo Route. Alternative IV-B would cross the Old Spanish NHT Armijo route within the East Las Vegas Wash AU (see Section 3.15.3.8, Old Spanish NHT Region IV subsection). This AU includes about 4 miles of the Las Vegas Wash, an important perennial water source that influenced the development of travel routes such as the Old Spanish NHT. The crossing would be located on NPS lands along the Las Vegas Wash about two miles west of Lake Mead, and about 1 mile west of the point where the Mojave route diverges from the Armijo route. The proposed crossing would be about 0.5 mile west of the existing campground and 1.5 miles east Northshore Road. Towers would be placed to avoid surface disturbance near the actual trail and would span the Las Vegas Wash and other natural features associated with the Old Spanish NHT Armijo route.

Development of Alternative IV-B would result in a the placement of a transmission line where no utility corridor currently exists and would reduce the scenic quality of the associated setting of the Old Spanish NHT Armijo route (i.e., the Las Vegas Wash, Lake Mead and the surrounding mountains that lead to the development of these perennial waterbodies), both during construction and operations. Scenic quality of the Lake Mead area to the east would be reduced to Class B; the area within the wash itself would remain as Class A. Alternative IV-B would be visible from 13 miles of the Old Spanish NHT Armijo route. This would include portions of the route that are now under Lake Mead, all of the East Las Vegas Wash AU, the adjacent 2-mile Lake Las Vegas AU (where the historic Las Vegas Wash has been subsumed by a man-made lake and planned development) and the eastern half of the Clark County Wetlands Park AU where terrain or development at Lake Las Vegas does not block views. Section 3.12, Visual Resources, contains mitigation to reduce further visual impacts, such as matching tower spacing to existing transmission lines.

There are no known Old Spanish NHT historic or interpretive sites located near the proposed crossing. The campground along the Las Vegas Wash would be the closest existing recreation facility for future trail interpretation. The campground would be well suited for this use due to its proximity to the Wash and the point where the Armijo and Mojave trails diverge, its views of Lake Mead (the historical Virgin

River/Colorado River confluence), and its established use for tourism. The development of the Alternative IV-B alignment would diminish the desirability of this portion of the Lake Mead NRA for tourism in general and degrade the associated setting of the Old Spanish NHT near the campground.

Overall, these impacts would not preclude development of a management corridor for the entire Old Spanish NHT Armijo route, but would diminish opportunities for effective management, protection and interpretation of the route within the Las Vegas Wash, and in particular, in areas retaining high setting integrity. Opportunities for Old Spanish NHT Armijo route trail interpretation in settings with high integrity may still exist but they would be located outside of the Region IV analysis area.

Mojave Route. Alternative IV-B would cross the Old Spanish NHT Mojave route twice. The first crossing would be on NPS lands within the East Las Vegas Wash AU (see Section 3.15.3.8, Old Spanish NHT Region IV subsection), about 0.5 mile south of the Armijo crossing, where the Mojave route is crossed by Lakeshore Rd. Impacts would be similar to those described under the Armijo route, but reduced because the crossing is further away from those elements of setting that relate directly to the Old Spanish NHT in this AU. There are no known Old Spanish NHT historic or interpretive sites located near the proposed crossing. The closest interpretive marker is about 2 miles southwest of the crossing (within the East Las Vegas Wash to River Mountains AU, see viewshed discussion, below).

The second crossing would be located about 2 miles south of Railroad Pass, where US-95 and old US-95 converge. The crossing would be on DOE lands and would not be within a designated utility corridor. The crossing would be located on the east side of US-95, at a point where multiple transmission lines cross the Old Spanish NHT and US-95 enroute to Boulder City's designated Solar Energy Zone, which includes several solar facilities and substations. Development of Alternative IV-B would be consistent with existing setting and scenic quality is already low in this area (Class C). There are no known historic or interpretive sites located near the crossing, and the area in the immediately vicinity of the crossing is not conducive to interpretation due to development and low setting integrity.

Alternative IV-B would be visible from 20 miles of the Old Spanish NHT Mojave route. This would include all trail mileage within the East Las Vegas Wash and the East Las Vegas Wash to River Mountains AUs, portions of the River Mountains AU (except where blocked by the mountains), and the majority of the Railroad Pass to Searchlight AU. Within the East Las Vegas Wash to River Mountains AU, there is an Old Spanish NHT interpretive marker at the intersection of E. Lake Mead Parkway/Lakeshore Road and the River Mountains Loop Trail (which abuts the River Mountains). The transmission line would be visible from this marker.

Northern Route. Impacts would be the same as described under Alternative IV-A, as the alignment would be the identical.

Overall, impacts from Alternative IV-B would not preclude development of a management corridor for the entire Old Spanish NHT Mojave route, but would diminish opportunities for effective management, protection and interpretation the route within the East Las Vegas Wash AU, the AU with the highest setting integrity. Opportunities for Old Spanish NHT Mojave route trail interpretation in settings with high integrity may still exist but they would be located outside of the Region IV analysis area.

Alternative IV-C

Alternative IV-C would cross the Rainbow Gardens ACEC, the Lake Mead NRA., and three segments of the Old Spanish NHT.

BLM SDAs

Rainbow Garden ACEC. Impacts would be the same as Alternative IV-B.

Lake Mead NRA

Approximately 14 miles of the Alternative IV-C alignment and refined transmission corridor would be located within recreational areas of the Lake Mead NRA. Impacts would be similar in context and intensity to those discussed under Alternative IV-B and the proposed mitigation would be the same. The NPS has indicated that construction and operation of this alternative is incompatible with NRA management and residual impacts would not meet the "no impairment" standard to which NPS lands are held.

National Historic Trails

Alternative IV-C would cross the Old Spanish NHT Armijo and the Mojave routes. The alignment would be visible for 38 miles of the Old Spanish NHT. Viewshed mileage includes portions of the Armijo, Mojave and northern routes. Impacts to each Old Spanish NHT route are discussed in greater detail below.

Armijo Route. Impacts would be the same as described under Alternative IV-A, as the alignment would be identical.

Mojave Route. Alternative IV-C would cross the Old Spanish NHT Mojave route twice. The first crossing would be within the East Las Vegas Wash AU (see Section 3.15.3.8, Old Spanish NHT Region IV subsection). Impacts would be the same as described under Alternative IV-B, as the alignment would be identical.

The second crossing would be located within the Railroad Pass to Searchlight AU on private lands just east of the Southern Terminal siting area and about 15 miles north of the Town of Searchlight. The crossing would be about 1 mile west of US-95 and adjacent to for existing transmission lines. Development of Alternative IV-C within this AU would be consistent with the current setting and scenic quality is already low in this area (Class C). There are no known historic or interpretive sites located near the crossing, and the area in the immediately vicinity of the crossing is not conducive to interpretation due to development and low setting integrity.

Alternative IV-B would be visible from 20 miles of the Old Spanish NHT Mojave route. Impacts would be similar to Alternative IV-B, but would be reduced in the River Mountain and Railroad Pass to Searchlight AUs because the alignment would be further away from the Old Spanish NHT Mojave route.

Northern Route. Impacts would be the same as described under Alternative IV-A, as the alignment would be the identical.

Overall, impacts from Alternative IV-C would not preclude development of a management corridor for the entire Old Spanish NHT Mojave route, but would diminish opportunities for effective management, protection and interpretation the route within the East Las Vegas Wash AU, the AU with the highest setting integrity. Opportunities for Old Spanish NHT Mojave route trail interpretation in settings with high integrity may still exist but they would be located outside of the Region IV analysis area.

Marketplace Alternative Variation

The Marketplace Alternative Variation and the portion of Alternative IV-B that this variation would replace would not cross any SDAs.

Alternative Connectors in Region IV

SDAs crossed by the alternative connectors and other key impact parameters are summarized in **Table 3.15-19**.

Table 3.15-19 Impact Parameters of Alternative Connectors in Region IV

	Sunrise Mountain Alternative Connector	Lake Las Vegas Alternative Connector	Three Kids Mine Alternative Connector	River Mountains Alternative Connector	Railroad Pass Alternative Connector
SDAs Crossings	2 miles of Rainbow Gardens ACEC 1 mile Lake Mead NRA	1 mile River Mountains ACEC 1 mile Lake Mead NRA 1 crossing of the Old Spanish NHT	3 miles River Mountains ACEC 1 mile Lake Mead NRA 1 crossing of the Old Spanish NHT	4 miles River Mountains ACEC 4 miles Lake Mead NRA 1 crossing of the Old Spanish NHT	No SDA crossings by alignment, less than 2 acres of refined transmission corridor within River Mountains ACEC

Region IV Conclusion

Alternatives IV-B and IV-C would cross approximately 14 miles of the Lake Mead NRA, which would not be compatible with SDA management or the NPS non-impairment standard. Alternatives IV-B and IV-C also would cross 3 miles of one BLM ACEC. The crossings would be outside of designated utility corridors (in ROW avoidance areas), and would be incompatible with ACEC management. Alternative IV-A would not affect the NRA, but would have the greater impacts to BLM SDAs, crossing 16 miles of ACECs, nine of which would be outside of designated utility corridors. Alternative IV-A also would have potential for road and construction support area development within one NCA. Impacts to the NCA and ACEC areas outside of designated utility corridors would be reduced through application of mitigation, including the avoidance of road construction, but the impacts of a constructed transmission line would remain.

All three alternatives would cross portions of the Old Spanish NHT and would have similar viewshed mileages, but Alternatives IV-B and IV-C would have one more crossing than Alternative IV-A. While these impacts would not preclude development of a management corridor for the Old Spanish NHT, two of the three crossings associated with Alternatives IV-B and IV-C would occur in areas where development of a transmission line is not consistent with existing conditions and the visual impacts would affect an associated natural setting of high integrity and opportunities for future trail interpretation to a greater degree than Alternative IV-A. Once the final transmission line alternative is selected, an intensive Class III inventory and in-depth setting analysis would be conducted to determine the impact to contributing segments crossed by the alignment or from which the alignment would be visible. If contributing segments would be adversely affected, the effects would be minimized or mitigated onsite or offsite as stipulated in the mitigations proposed in Section 3.11, Cultural Resources (**CUL-1**), as stipulated in the Cultural Resources PA developed for the Project, and through implementation of Design Features and BMPs in concert with the NPS and the Nevada BLM National Trails Management Program Lead. Mitigation identified in Section 3.12, Visual Resources, includes measures to reduce visual impacts through use of BLM environmental colors and location of structures, roads, and other project elements as far back from road, trail, and river crossings as possible, and, where feasible, employ terrain and vegetation to screen views from crossings.

3.15.6.7 Residual Effects

Residual effects to SDAs from the transmission line itself would be the same as those described under each action alternative and would consist primarily of visual impacts and loss of vegetation and wildlife habitat. There would be no residual effect to SDAs from road development if mitigation limiting access to existing roads is applied. In cases where access road development in SDAs would not be fully avoided, but rather limited to existing utility corridors and/or subject to closure/rehabilitation, residual impacts would include vegetation loss and visual impacts until reclamation is successful. These impacts would be the same as described under each action alternative. Mitigation related to vegetation maintenance would

reduce, but not eliminate, impacts to SDAs that result from vegetation loss during operation of the transmission line.

3.15.6.8 Irreversible and Irretrievable Commitments of Resources

All operation impacts to the values of SDAs described above would be irretrievable until transmission line decommissioning, after which time the values of impacted SDAs would be reclaimed. It should be noted, however, that reclamation activities may have limited success in areas with poor soils, some vegetation communities would take years to re-establish, and some areas may never return to their former vegetation cover and composition. As such, these impacts may represent an irreversible commitment of vegetation resources and any SDAs managed for specific vegetation values. Section 3.5, Vegetation, contains additional information regarding vegetation reclamation.

3.15.6.9 Relationship between Local Short-term Uses and Long-term Productivity

Implementation of the Project would result in the use of some SDAs lands as ROW corridors. Long-term productivity of the SDAs would be largely unaffected except for areas where reclamation may have limited success.

3.15.6.10 Impacts to Special Designations from the No Action Alternative

Under the No Action Alternative, the Proposed Project would not be developed. There would be no impacts to SDAs beyond existing conditions and trends.